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FARM AND FIRESIDE

THE NATIONAL FARM PAPER

ESTABLISHED
1877

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Harvest Home Number

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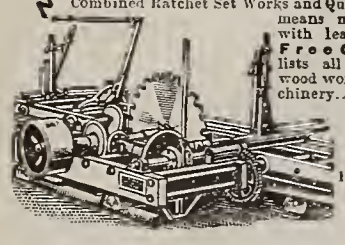

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With the Editor

HARVEST Home!

The phrase is one of the richest in any language.

It is rich in the inner soul that makes some words more stirring than poems, more illuminating than books. And of all English words, what two are fuller of meaning than "harvest" and "home?"

In "home" is the spirit of our best racial thoughts and aspirations. Our virtues cluster about the institution represented by its full round tones. It is in itself music. "Home, Sweet Home" is the most wonderful of ballads for two reasons—because to our race the thing sung about is the one that means most to us—mother, father, sister, brother, the dawning thoughts of infancy, the "long, long thoughts" of youth, the going forth and the incoming of bridal parties, the birth of babies, the sharing of burdens, the sacrifices of sickness and death, the long westering of life's sun, the slow departure of the sad cortége to that last bridal of the tomb—all things that reach our deepest depths of feeling center in the word "home." It means shelter from storm, privacy, a castle to be defended, a shrine in which to worship. For these reasons, the song touches the heart and moves the emotions.

Besides these things, the song is immortal because the word is composed of the sounds on which the human voice in singing loves most to dwell, the long "o," in enunciating which it gives the purest, roundest tone—as if in forming the word, some genius for expression had led to the selection of the most musical of our vowels as the heart of our greatest word, to express the most potent and precious thing in human life; and the liquid "m" in which the word vanishes, as with a vocal caress, like the lingering vibration of a bell.

And "Harvest!"

The word came into our language when it meant things to be thankful for and to celebrate, which we now take for granted. To our ancestors, the fierce farmers of the German forest so many centuries ago, it meant, as it does to us, a safe coming into port of the season's venture—the escape of the field from the flood, the passage of the hazard of frost, the turning away of the pestilences of mildew, rust, smut and ergot, the salvation from ravaging animals and insects, the burgeoning of the green plant, the escape from blight and hail and beating winds, the ripening, the reaping, the garnering. But to them it meant more. It meant that the neighborhood had fought off its foes, and saved both home and harvest from those things so remote from our lives, the torch of war and the trampling of armies. It meant three months of the reign of that mystic "power of peace"—so mightily greater than all the powers of war. It meant that the husbandman had gone afield all those days and weeks without meeting with any violence. And in those days that meant so very, very much to the farmers!

Real Thanksgiving

To get the real spirit of the old harvest home festival, we must try to put ourselves in the place of those who celebrated it. The men and women went out into the fields with their curved sickles, beaten out on an anvil of the village smith, and the children went along to glean. For in those days of hand labor grain was too hard to grow to make waste anything but sin. All about stood the somber forest in which the men of the "tun" or "township" had made their clearing—and in which roamed fierce wolves and bears and fiercer men. The "corn" was wheat, barley, rye, oats. The sheaves were loaded on the wain, the yokes of the oxen creaked, the last load went through the heavy gates into the stockaded barn-yard, and the family, and every family in the village, breathed easier. The harvest was home! The home was secured for another year against want, by the harvest! Prayers were said, thanksgivings were sung, and at night, by the light of the harvest moon, the villagers—for the farmers lived in villages—gathered on the village green and danced for joy.

When the western continent was discovered, a new corn was found—the maize, the greatest of all plants, America's biggest contribution to the world's agriculture. The Indians grew it, and it was called "Indian corn," to distinguish it from other kinds of corn. So when Whittier came to write his great harvest home poem, "The Corn-Song," "corn" with us had come to mean maize. For wheat, rye, barley and oats we had specific names, and we made a specific name of the old general term, "corn." But in other English-speaking countries, corn is still the name for all grains—as it is in the Bible, which tells us of Joseph's brethren going into Egypt to buy corn—and a corn-dealer in England, Scotland or Australia is a general grain-buyer. Indian corn in Australia is "maize," and in South Africa "mealies." And in almost every climate to which it is adapted it is becoming, as with us, the greatest crop for animal and human food.

The Wave of Harvest

So the real harvest home is being thrown later into the autumn by the growing kingship of maize. And as maize makes more autumnal the time when the last of the corn is garnered, so civilization spreads the season over the year. Like a yellow pulse-beat of some infinite Heart, the harvest starts in on the broad fields of Texas, in that springtime when the Alberta ranchman is waiting for the groun' to thaw. Before it runs the ever-deepening green seas mottled by racing waves of shadow. With it comes the tinkle of the sickle-bars, the sudden freckling of the fields into shocks, and following it the agglomeration of shocks into stalk-yards. It washes up over Oklahoma and Tennessee, swells high in Kansas, Ohio and Pennsylvania, thins out on the bar of the corn belt, swells again in the Dakotas, Minnesota, Oregon and Washington, and breaks in a splendor of plenty on that level prairie shore, upon which it gains year by year, from Prince Albert far, far west to the Rockies, where the encroaching ocean of grain is destined soon to so eat up the wilderness that our children will see it flow on down the Mackenzie, and over into a new Scandinavia in Alaska.

Both ways from the equator flows this pulse-beat of harvest. In South America, Africa and Australia harvest begins at the north and creeps south toward their pole, as ours travels north in the direction of ours. It emerges from the untrodden jungles of the upper Parana, runs down the La Plata, and south with the narrowing continent until it ceases in the uncultivated wastes of Patagonia—the Canada of the southern hemisphere. It comes from the Soudan to the scattered farms of Rhodesia and on to the temperate regions of Cape Colony. And out of the torrid north it sweeps over Australia, New Zealand and Tasmania.

Some astronomers believe that they can see on the planet Mars certain stripes called "canals" which are strips of irrigated lands along great canals constructed from the only place where water is found—the Martian poles—to the warmer lands where crops are grown. They think they see the dark vegetation creeping from the poles toward the middle of the planet as the season advances, and the water flows slowly along the canals.

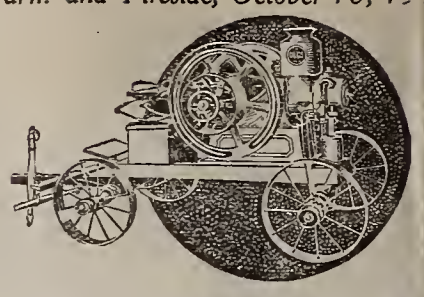
I do not know how much truth there may be in this, but this we know that if the people of Mars—supposing that there are any—could see from off there in space the line of our harvests, they would appear as bands of gold and brown moving like waves in water, both ways from our equator toward the poles, first a wave to the north, then one to the south, each wave in turn dying out against the polar wilderness, and each as it dies being replaced by a following one creeping out of the wilderness of the torrid zone. They would wonder about this everlasting succession of moving bands—wonder as we wonder about the mysterious canals of their planet.

To us the wonder should be no less. For the earthly bands of gold and brown are the visible signature on the globe of the mighty hand of Labor—the hand of all hands that possesses the right to the fruits with which it paints and embroiders the lands of the earth. Some day we shall see the grandeur and unity of this seasonal throbbing as well as if we were in Mars—and then Labor will have come into its own through the mighty ideal of the oneness of the Brotherhood of Production—a brotherhood in which shall be enrolled all the human race.

We seem in these days to have lost the power to rejoice over our yearly miracle of plenty. Our ancestors, harried by robbers, harassed by foes and hounded by ever-pursuing want, danced and sang and made merry at the harvest. Perhaps we are too safe, too prosperous, too sophisticated to be merry and glad. But I wish we could have back some of the gift of gladness. Maybe we shall regain it sometime. The poet thinks we shall, for he sees the time when

Glad girls carolling from field and town
Will go to meet Him with the labor-crown—
The new crown, woven of the heading wheat.

Herbert Quick



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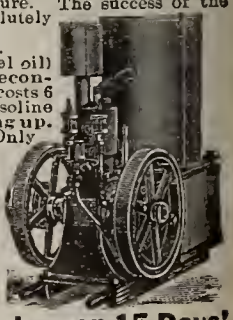

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FARM AND FIRESIDE

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The Consequence of Corn

By F. D. Coburn, Secretary Kansas Department of Agriculture

CORN is one of Nature's choicest bounties. Of uncertain origin and lowly birth it early demonstrated its qualities of leadership and assumed the throne of American field crops. A member of the family of grasses it has, beyond its numerous relatives, attained a preeminence that amounts almost to solitude. It possesses in marked degree the qualities of both prince and plebian, for it rules in regal splendor among the products of the soil and is common everywhere, no other crop in the United States having so wide a range of adaptability. It is peculiarly suited to a republic, for it favors alike the rich and the poor, the saint and the sinner, the Jew and the Christian, Republican, Democrat, the Standpatter and the Insurgent. The universality of corn is shown by its growing in every state, as becomes a native plant. It is the cosmopolitan crop and its beneficence is felt in every community: plenty of corn is a specific for panics; its abundant production a preventive of financial ills and a basis for well-being.

Season after season the growing corn in its emerald verdure of summer is the cynosure of the nation's attention. In its fields stretching for unnumbered leagues over the uplands, across the slopes and through the valleys, in large measure rest the industrial and commercial hopes of an empire. When in autumn the stalks bend with their ripening riches, yellowing with maturity, multitudes rejoice and do homage to this monarch cereal, for another draft on Mother Earth has been honored and the proclamation of Thanksgiving is in order.

Soon will resound in thousands of fields the heavy thump, thump of the ears as they are tossed into the wagon and against the barricade of high sideboards, and again will be heard the crackle of the stalks as they bend and break under the wagon behind the self-guiding team, whose progress is encouraged by the more or less gentle admonitions of its master. The well-built shocks that checker the fields will stand like sentinels guarding the home of the farmer, and by their substance attest that again the corn-plant has transmuted gold and moisture, silica and silt, shadow and shining into immeasurable nourishment, to satisfy hunger, impart strength, promote health and bring wealth by processes more magical than the alchemy of old.

Far more than the unthinking would credit does corn influence the country's commerce. Shorten the crop and the plans of the business world must be changed and its purse-strings tighten. Its growth arrested by conditions foreboding diminished yield benumbs trade, stagnates business, halts commerce and the country's industrial and financial mechanism runs in the low gear. The barometer of business hangs from a corn-stalk and opulent yields are the outriders and heralds of prosperity.

It is in America that corn is developed in highest perfection and greatest profusion. Each year its growing converts as if by miracle the elements of earth and air into the merchantable equivalent of more than a billion dollars, amounting in 1909 to $1,652,822,000, the most valuable yield in the country's history. a thaumaturgy that in one hundred and twenty days meant to its workers $14,000,000 a day, or the price of two Dreadnaughts each twenty-four hours. Fifteen years ago the value of the crop amounted to about a third of that of 1909, and ten years ago the aggregate output was worth considerably less than half so much. Of the total value of the agricultural products of the United States of $8,760,000,000 in 1909, corn alone contributed about one fifth, an increment for which no one was plundered.

A greater calamity to our commerce than the failure of the corn could scarcely be imagined. Its default for a single season would create financial havoc, for the prosperity of the United States depends more largely upon corn than on any other traffic commodity, the vitalizer of innumerable branches of trade and the buttress of our immense live-stock and collateral industries, essentials to business supremacy. Aside from its popular use as a food for man and beast it is a sovereign consideration in manufactures, and its remarkable utility is illustrated by the variety of its products. From the grain are made over one hundred articles, each having its distinctive uses, and among these may be enumerated several grades of glucose, for which perhaps seventy-five million bushels of corn are used annually; sugar, starch, oil, oil-cake, rubber, gums, distilled spirits, alcohol for commercial uses, a variety of breakfast-foods and meal. From the stalks are evolved cellulose that has numerous uses, an important one of which is the packing of coffer-dams in warships to prevent their sinking when pierced by projectiles; smokeless powder, paper and other articles, and developments of the future will greatly lengthen the list.

The sapient farmer does not measure his profit by the theoretically narrow margin between the items of "cost" and "value." He does not, as a rule, anticipate selling his corn by the bushel at the prices current, and if he did, would not expect more than a moderate return for his labor and investment; it is the conversion of it on the farm into beef, pork, poultry, dairy and similar products from which comes the surplus to equip the home and build the school-houses, colleges, churches and highways that are such coveted and prominent objects on his horizon and so largely the measure of his ambition. The cash equivalent of the corn crop, when converted into meat or otherwise profitably utilized, is multiplied, and of course the great bulk of it is used for these purposes. It is corn that puts the gloss on the coats of the live stock, strength in their sinews, fat on their backs and milk in their udders. It helps make pork at a cent and a half a pound, and beef at two cents, while as pone or pudding it appeals to the tastes of all, infant and adult.

Where corn is most abundant live stock are most numerous, and particularly where corn and grass together abound are swine most profitably reared. Hence, they are found in America in largest numbers and highest development, the United States not infrequently producing upward of fifty per cent. of the world's supply. The value of the swine industry to the United States, which rests largely on corn, is suggested by its surplus products exported to other countries, amounting to about $130,000,000 annually. Swine-growing centers in the Mississippi Valley, where corn is grown in greatest abundance and at least expense, and the eight states of Iowa, Illinois, Texas, Nebraska, Missouri, Indiana, Ohio and Kansas have over fifty-four per cent. of the 47,782,000 hogs reported on hand January 1, 1910. The same states produced sixty per cent. of the preceding year's corn crop.

North America produces nearly four times as much corn as the rest of the world. Its 1908 yield was 2,761,519,000 bushels, while the product of all other countries together was only 716,809,000 bushels. The 1906 crop of 2,927,416,000 bushels, if placed in fifty-foot cars, twenty tons to the car, would make a continuous train of such length as to twice encircle the globe. The 1909 corn-field of the United States was 108,771,000 acres, or about 170,000 square miles, an area approximating the total land surface of Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New Jersey, Maryland, Delaware, Ohio and Pennsylvania combined, with the island of Porto Rico for good measure. This corn-field is considerably larger than Great Britain and Greece, and outmeasures Italy and European Turkey combined.

Testimony to the amazing importance of corn to the United States may be found in the statistics issued by the nation's Department of Agriculture. In 1909 its value was nearly one hundred per cent. greater than that of the same year's cotton, which ranked next; over twice that of wheat; considerably more than twice the value of the hay, and greater than the value of the wheat, oats, barley, rye, buckwheat, potatoes, tobacco and sugar-producing plants combined. We read of and wonder at our vast underground treasures and hear of the incomprehensible fortunes made in steel, copper, gold and other minerals, and many assume that in these are found the chief sources of common wealth. Yet the aggregate of all metallic products of the United States, including the gold, silver, copper, zinc, lead and others, mined annually amounts to only about two thirds or less of the income from corn alone.

Despite the large place it has occupied in public affairs, and so great an influence as corn is and has been in the agriculture of America, it promises greater things. By the science of plant breeding unsuspected possibilities are being revealed. Inspired by the knowledge that through selection based on chemical analysis the sugar content of the beet has been increased from about five up to sixteen per cent., the idea was recently advanced that the chemical composition of corn might be similarly changed, and experiments have shown that it could be done at will, to either a high or low protein or oil content or other constituent. It seems probable that in the future corn for certain purposes will be bred in certain well-defined ways, as are horses, cattle and sheep. Thus grain rich in protein would be correspondingly more valuable as a feed for growing animals; high-oil corn would be of special advantage in their fattening, and increase of carbohydrates render it more valuable for manufactures of such things as starch, glucose and many like articles. Discoveries of this character, along with the germinator test, graded seed from a careful selection of seed ears, seem to foretell for corn a far greater importance than it has yet attained.

Constantly widening areas devoted to this crop are evidence of its increasing appreciation. So easily and abundantly raised and in such convenient form for use, its exceedingly high nutritive value, its digestibility and palatability give its possessor a long lead in every branch of animal husbandry. While as a cheap fattening food corn has no peer, in its great strength lies its weakness when used by the man who does not give recognition to its limitations as well as to its capabilities. Its drawbacks might mostly if not entirely be overcome by devoting enough of his ground to alfalfa to provide the elements needed for properly balancing the corn ration, and this ideal combination fed to live stock, with the resulting manure applied to the land, would in time make of every farm a reservoir of fertility and a rich heritage to posterity.

How Did You Sell Your Crop?

Some Homely Truths on Marketing—By E. L. Vincent

"WHAT did you get for your stuff to-day?"

"Oh, they were paying only fifty cents. I looked around till it got late and then I had to take what I could get. How did you find the market?"

"Well, my load brought me sixty-five cents. You see, I had it all contracted for when I was down last week. I knew just where I was going. After I got my load off I spent the spare time I had looking around for another trip."

The man who had such a bad time selling his load, and finally was compelled to accept the terms of buyers who saw that he was at their mercy, sat half-way turned about on his seat for a moment, thinking it over, and then called back to his neighbor, in a tone half resentful, half discouraged, "You always were a lucky dog."

And wheeling around, he gave his horses a sharp cut that sent the heavy wagon homeward, rumbling through a cloud of dust.

Now, those two farmers stand as representatives of a large class of their fellows. One is always a little bit behindhand in his methods of marketing produce; the other has made a study of it and the results show his success as a salesman. Human nature is pretty much alike the world over. Everywhere we stand face to face with the same big problem when our crops are ready to turn off. How are we best to exchange them for money?

A change has come over this branch of farming in the past few years. Twenty years ago, about the only way I, as a farmer, had of disposing of my produce was to load up in the morning, drive away to market, call at some store dealing with the kind of stuff I had on and sell there what I could at any price the dealer might propose, then go to another and so on until my load was worked off. I have spent hours of this kind of tramping about the city; and of all tiresome, discouraging, heartbreaking jobs, that just about beats all. I always went home sick and tired out, body, soul and spirit. It became a perfect dread to me to think of making such a trip, for I well knew what state of mind I would be in when I started for home. Worn out, yet comforted by the fact that my face was at last turned homeward, I would climb into the wagon with a big sigh of relief and wish there might be some way discovered of disposing of the stuff from the place to better advantage and without so much wear and tear on the life of the producer.

Well, we are coming into a time now when marketing is far less of a dread and the returns are decidedly more satisfactory. Now it is no unusual thing to have the dealer come out and ask, "What do you want for this?" That makes the soul's thermometer rise to the top mark on the scale! Isn't it more like living? No standing in the store an hour or two, waiting for the autocrat of the market to "get around" to you. No more haggling over prices. A good square business deal, done up in short order and off for home in good season. That tells the story.

Two or three things have had a tendency to bring about this better condition of things. The first is the spirit of coöperation which is making itself felt among the farmers in many parts of the country. I say many parts of the country, because we are yet only in the formative stage of the movement. Farmers need to be educated along this line, and education is always a slow process.

Personally I never had any experience in the coöperative selling of farm crops. In my section a few years ago an effort was made to organize us farmers so as absolutely to control the marketing of all kinds of farm produce. I did not myself think it best to become a member. There was a good deal of machinery to it, with a secret form of initiation and other features which I did not approve of. Most of us farmers refused to join, perhaps for the reasons that controlled in my own case, and so it was a short-lived affair and did not bring about any good. Perhaps we were too old-fashioned. Maybe we missed a chance to help on a good movement. I feel sure now that farmers should think well before refusing to help in any coöperative movement.

To make coöperation of this kind a success, the farmers must enter whole-heartedly into it and place the management in the hands of earnest, level-headed men and then stand by whatever action is taken by the official board. There is in most farmers, as there was in us, too much of a spirit of independence which renders any attempt at coercive organization a failure. Such a body may start out all right, but first you know somebody has leaked out and set up shop for himself. He has found that he can do better for himself, or thinks he can, than the organization can do for him. But the success of coöperative selling in many parts of this country and in Europe proves that wise collective action is best.

Some farmers have a knack at selling stuff that is little short of genius. I have now in mind one who beats all his neighbors at this. He never fails to work off his own farm stuff, but he buys a good deal of hay, potatoes and fruit of his neighbors and works that off, too, at a margin which makes it profitable to all concerned. I once heard a man say to him, "You could take a load of manure to town and sell it for good hay!" Of course, this was an exaggeration; but he certainly had a way of disposing of hay that couldn't be equaled by many of us.

It will be a help to many to know just how this man succeeded so well in the selling end of the farm business. I hope he will not think we are stealing his secrets, for there is plenty of room for us all to work out a similar plan, wherever we may happen to live. In fact, our man of the lumber-wagon, jogging home with his money in his pocket after the little talk with his neighbor about solves the problem. It is all in having the sale made beforehand. The secret of successful marketing is in having all the arrangements made when we drive to town, so that we may know just where we are going and what we are to receive.

This man uses the telephone wisely and freely. Standing at his instrument he gets in connection with those who deal in his particular line and finds out what is needed, when it will be wanted and the price. This means that the farmer must know current prices. I am satisfied that we as farmers do not pay enough attention to this part of our business. We are so busy growing stuff that we do not post ourselves as we should as to the value of things. But our farmer friend of whom we are now speaking is up on these points and he knows whether the offer made is a good, fair one or not. If he is satisfied with the figure named, well and good. If the outlook with that dealer is not satisfactory, another man is called up and so on until the work of a day's deliveries has been mapped out.

And here I want to stop long enough to pay a word of tribute to this farmer's wife. As a saleswoman I am not sure but she holds the palm, even as against her husband. I have been present when this woman, using the 'phone, would sell produce, to be marketed on a certain day, so easily that it made me ashamed of my lack of ability in this line.

The farmer's wife can be of great help to her husband in this respect. How? By having everything with which she has anything to do nicely arranged and so put up that the very sight of it invites a sale. You let a man go into town with a lot of butter, for example, in packages that are covered with soiled wrappings and the brine running out on all sides, and a man must have a pretty strong stomach to take it at any price. On the other hand, if the packages are all neat and clean and the sight, taste, smell and all are appetizing, it is no trick at all to make a sale. It sells itself.

I remember a bit of experience in this line. We were making our own butter, using a deep-setting creamer. It was nice butter. The Lady of the Kitchen had done her part well and the butter was first class in every respect. We bought one of the prettiest prints we could find, with beautiful leaves and fruits on the top and put the butter all up with it. It looked fine. The dealer looked at it a moment and the sale was made at a figure some cents above the market. If anything were needed to show what the dealer thought of it, we found it in the lovely pyramid he made of the bricks by placing them in one of the windows of his store. And the way the butter sold was proof enough that it pays to take some pains about such things.

By a little foresight we can work off most of our butter, potatoes, apples and all kinds of garden stuff in the way I have mentioned. I have known the man referred to to fill his big cellar almost full of apples and potatoes and work them all out before spring at good, fair prices either to private parties or dealers in town. It was no trick at all for him.

All such things may be disposed of in the same way. I have just this morning contracted a lot of chicks for delivery ten days hence. Of course, this takes time. One must be prepared to meet with all classes of men, but this is a part of our education. To be able to do business with all classes and sorts of characters, to meet with rebuffs and to keep sweet all the way through is no slight trick, but an accomplishment that may well be cultivated.

To correct a mistake and do it so that everybody shall be happy is not always an easy thing to do. It always pays to count the money over on the spot, as well as to see that the reckoning is made properly. Two or three times it has been my fortune to have the error to my advantage. It should never be a temptation to a farmer when this is the case. There is only one fair and square thing to do, and that is, make it right, then and there. Good measure, good quality and good prices are what count. It is not difficult to build up a reputation on such a basis.

The closer we can get to the man who eats our produce, the better it will be and yet I have in mind now a lady whose almost sole dependence is on the butter she makes. She is far from a creamery and must depend on some one else to market her produce, being alone in the world. One might think this a most difficult position, and it does have its hardships; but the butter she makes is so good, she is so prompt and reliable that she never has any trouble whatever in getting off every ounce of butter she can make at a good figure. If she could make more, it would be sold before it was made. With butter trade thus worked up, one can surely find market for eggs, sweet corn in its season and many kinds of garden stuff. People like to deal with the farmer, for they are sure then of getting good, fresh stuff and at reasonable prices, and in good measure.

Still another thing we have learned on our own farm, and it would be a good thing for every farmer to see to it, and that is that it pays to sort and grade up all kinds of stuff from the place. My attention was first called to this by a groceryman who said in looking at some berries that were offered, "Why don't folks learn to sort up the berries? Now look at these. Here they are, good, bad and indifferent, all in the same basket. If the good ones were in one basket, I would gladly pay three cents more for them, and then the rest would sell at a good price to go where people are not so particular. I have a trade that requires a good deal of first-class stuff. Not everybody will buy stock that is at all inferior. If I can not offer them good, well-selected stock, they will go where they can find it. Tell the folks to grade their stuff up."

Another grocer said, "I will give you a dollar and a half a bushel for apples as good as these any time you bring them in. But I must have them sorted up. You can sell the grades just about as well and get a good deal more for the first-rate stock."

So we have made up our minds that it pays to grade up. A crate of apples or potatoes looks much better all about of a size. The size may be small, but if uniform the sale is more easily made. A similar assortment of eggs, not this time as to size, but as to color, has proved to be profitable for us. Our first deals in eggs were after the plan followed by so many farmer folks, with the man driving about in the wagon, who makes it his business to cut off a little on the price of the eggs he buys and makes it up in the added rate he charges for the groceries and other stuff he carries with him. This rule of "heads I win, tails you lose" is a disastrous one for the country people. The day will come when we will all break away from it, I am sure, and sell our goods for cash and pay cash for what we want.

The best way to sell eggs, if one be too far from a good market to place them in the hands of consumers, is to ship them to a reliable commission merchant. Then, by selecting the white eggs, one may often realize several cents above the home price and get it in cash. The same plan may be pursued with chicks, ducks or other poultry.

By making a trip to the city one may often make a contract with some hotel or eating-house to take all the eggs, poultry or butter produced during the year, and at a very desirable figure. It takes quite a burden off one's mind to know that he is always sure of a good sale. There is then no hunting up delinquent customers, no beating about the bush for trade.

But what of the larger traffic of the farm, that in heavy crops of grain, potatoes or fruits? How shall we best handle these? By standing together nationally the farmers might pretty nearly dictate the price of these commodities within certain limits. Such coöperative fruit and truck growers' associations as the California Fruit Exchange, the apple-growers' associations of the Northwest and the Virginia Truckers are able to ship when and where their stuff is wanted, and thus never break the price anywhere. This is a good thing for producer and consumer.

As long as the middle-man is willing to do our work at a fair percentage of profit, well and good; but now it seems as if many of the middle-men were serving no one's interests but their own. The farmers are learning how to dispense with them, and unless they can serve producer and consumer reasonably, they are likely to find themselves between an upper and a nether millstone.

"Coöperation" the Watchword Everywhere

IT IS becoming daily more apparent that grain-growing within a day's drive of our large manufacturing towns, must give way to the growing of fruits and vegetables. Even this requires for its continued success a system of coöperative selling which is not based on the prices obtainable in the nearest market, but often in the best price at a distance from the home of the grower.

Much too little attention has been given to this part of the business of farming. The over-production and under-marketing of the 1909 potato crop in Michigan and adjoining states afforded an example of the lack of knowledge of the needs of the markets in each of the principal cities in the United States. With a businesslike system of coöperative selling, the needs of more distant markets could have been met without the interposition of a superfluous number of middlemen, who had no information other than that found in the daily papers of the nearest cities. To increase the acreage yield of potatoes and other trucking crops of a perishable character is important, but it is of even more importance to be able to sell the crop for more than the cost of production.

We have now entered upon a new era, and the time has come when we must get out of the old ways of selling; keep posted as to prices everywhere, and be in a position to club together and send much of the produce not needed in our local markets to the more-distant, better-paying ones, and that, too, in car-load lots. A business agent, who should be required to give a commercial bond, would obviate the fear or danger of loss to the growers, and would be a much superior agency for selling than commission merchants or middlemen whose financial standing is not given in Bradstreet's or Dun's business directories. The bonded business agent could also buy in car-load lots and distribute whatever the farmer requires at cost, excepting a fair salary for the agent of the "Farmers' Coöperative Buying and Selling Club." Such collective action through a bonded, salaried business agent so employed, would tend to increase the confidence and good feeling between neighbors; for the benefits that would accrue from the adoption of such a system would promote a spirit of healthful progress by putting good pay in each farmer's pocket, and what is of equal importance, good will in each heart.

WM. M. KING.

What We Have Garnered

A Comprehensive Review of the Year's Crops by Experts

Great Corn Crop for 1910

THIS is written before frost. Barring freezing, the corn crop is going to be mighty close to that of the record-breaking year of 1906. This optimism is in the figures of the Corn-Reporting Board of the Bureau of Statistics of the Department of Agriculture. Average condition on September 1st was 78.2, as compared with 79.3 for August; 74.6 on September 1, 1909; 79.4 on September 1, 1908, and 79.5, the ten-year average, on September 1st.

The corn has had its troubles and the yield will not be as big as was expected August 1st, but it will nevertheless be immense. The danger remaining is killing frosts. If they come early, the optimism of the statisticians will be knocked galley west. If the frosts are delayed until the crop is matured, the yield will probably be the second largest in our history.

According to figures compiled up to September 1st, judging by experience and eliminating serious damage by frosts, it is estimated that the yield for 1910 will be approximately 2,907,000,000 bushels.

Had we been favored with good conditions the crop would have been a record-breaker. The acreage is 114,083,000 acres, the largest in our history, and the largest ever planted in any country to a single crop. Early conditions were particularly favorable and the soil was in a generally good condition. The season was early, which accounts, in part, for the heavy planting. A late severe cold wave nipped the plants in many sections and much seed perished in the ground, necessitating lots of replanting. The crop which had started so early was from two to four weeks late in midsummer.

But for all this the condition on July 1st was 85.4, as compared with 89.3 on July 1, 1909; 82.8 on July 1, 1908, and 85.1 the average condition for ten years. On July 1st the condition of the crop was extremely gratifying and well above the average. The increased area under cultivation as compared with the final estimate of last year's acreage showed an increase of 5,312,000, or 4.9 per cent.

But during July the corn farmer encountered difficulties. The drought in that month was very severe, especially in the western part of the corn belt. In the line of states stretching from North Dakota to Texas, South Dakota was the only state which escaped serious damage from it, the condition in that state being just exactly the average. North Dakota was two per cent. below the average, and Nebraska twenty-one per cent., as was also Kansas, while Oklahoma was twenty-seven per cent. below. Peculiarly enough Texas at that period was almost twice as much above the average as Oklahoma was below it, the superiority to the ten-year average there being forty-seven per cent.

In contrast to the corn belt the crop in the South was progressing finely. The showing in Mississippi was particularly good, being twenty per cent. above the average; Louisiana sixteen per cent.; Arkansas thirteen per cent.; Alabama eleven per cent.; Tennessee six per cent.; South Carolina five per cent., while Georgia's crop was up to the average. Illinois, the greatest corn-raising state, reported an average crop for July, but Iowa, also great, was touched by a drought so severe that had not the plants been retarded by the cold wave the crop would have been far below the average. These adverse conditions were felt keenly in Oklahoma, Kansas and Nebraska, in all three of which states destruction was only averted by the arrival of rain at a time when the drought had produced considerable "fire" among tasseled corn and a great deal of pollen had been destroyed. Plentiful moisture in August improved the crop in all of the droughty states except Oklahoma. There the damage was so great that even plentiful rains could not repair it. The result is that Oklahoma at this writing reports but half a crop and the probabilities indicate less than that.

While the corn belt was recovering the ground lost by drought the crop deteriorated during August in Ohio, West Virginia and Pennsylvania, thus pulling down the average. As a result in the three states named the average condition on September 1st was slightly below the average for August 1st. The decline during August, however, was not so great as is to be expected during that month. Statistics show that the decline during August for a long period of years averages close to two and one half per cent., but this year was only one per cent.

Notwithstanding all these severe conditions reports now in hand indicate that the condition of corn on September 1st the country over is only about two per cent. below the average, as compared with the last ten years. This fact, however, is not at all alarming when it is remembered that with the immense acreage this year the crop, even in its reduced condition, will be far above the average in total yield.

The largest crop in our history was in 1906, when a record of 2,927,000,000 bushels was established. Figures on file at the department show that the average yield per acre is about 25.8 bushels. On the basis of the reports the yield will not, it is believed, exceed 25.5 bushels per acre; and the production for the year will be approximately 2,907,000,000, or only 27,000,000 bushels less than the banner year of 1906. The only feature of concern to the farmer is the fact that the crop is backward. If it escapes further setbacks, the department will not be surprised if the present estimate of 2,907,000,000 bushels for the year is exceeded by several millions. In other words, if it can be matured without killing frosts, the crop will be an unusually good one.

GRAIN AND HAY THE LAST FOUR YEARS

	1910	1909	1908	1907
Winter Wheat.....	458,294,000	446,366,000	420,218,000	403,908,000
Spring Wheat.....	217,000,000	290,823,000	244,384,000	230,179,000
Total Wheat.....	675,294,000	737,189,000	664,602,000	634,087,000
Corn	2,907,000,000	2,772,376,000	2,668,651,000	2,592,320,000
Oats.....	1,030,000,000	1,007,353,000	807,156,000	754,443,000
Rye	32,088,000	32,239,000	31,857,000	31,566,000
Barley.....	145,500,000	170,284,000	166,756,000	153,317,000
Flax	14,400,000	25,856,000	25,805,000	25,851,000
Hay (tons).....	60,116,000	64,938,000	70,798,000	63,677,000

Of course, frost may pull down the average tremendously. As the crop stands at this writing the prospects that it will run above the average are excellent.

WALTER J. FAHY.

Wheat, Other Small Grains and Hay

FOLLOWING the doleful reports of last summer, the yields of crops in the United States will be beyond expectations. Production, in spite of wide-spread unfavorable climatic conditions, is totaling a harvest above the average for wheat, corn and oats; the three greatest of our grain crops.

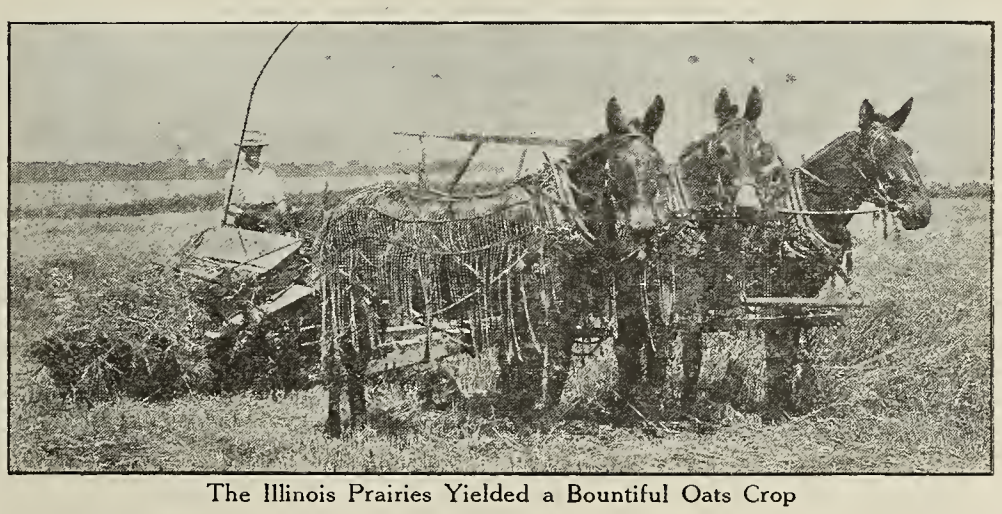
Wheat, which is so important an item in determining our command of the world's free gold, will show a yield above the five-year average. Losses in the Northwest, notably North Dakota, will be more than made up by the winter wheat country. The total production is estimated around 675,000,000 bushels, which is our largest harvest exception for those of 1909, 1906, 1905 and 1901. Consumption has so increased that the crop should sell at good prices and the aggregate return in new wealth should average up well with the enormous creations of the last five years.

The quality is high, which means a good demand by domestic millers. Foreign importers will buy it to mix with the wheat of Europe damaged by excessive rains. France, Germany and the United Kingdom have suffered losses from heavy rains and are already showing interest in American wheat. The United States is growing more and more independent of the foreign market as domestic consumption increases and the surplus to export will be small compared with the amount used at home.

After a season of considerable uncertainty, the oats crop is excellent. The harvest should approximate 1,030,000,000 bushels, which in a season of important losses is doing remarkably well; it is, in fact, the greatest yield ever recorded. The Northwest, including Wisconsin, will have small returns owing to the drought. States like Illinois, Iowa, Indiana, Kansas and Nebraska have harvested a crop above the ten-year average.

Owing to the fact that the barley crop is raised so largely in the states of Wisconsin, Minnesota and the Dakotas, the 1910 harvest is below the average because of drought and extremely high temperatures when it was most susceptible to injury. The shortage this season is large. The rye crop shows little variation from former years, there being no very serious shortage.

Although our flax production is not large in bushels, it is valuable where raised and large manufacturing enterprises are dependent upon the seed for their raw material. The bulk of it is produced in the Northwest and the yield is most disappointing as a result of the drought, especially in North Dakota, where the largest area is seeded.



The Illinois Prairies Yielded a Bountiful Oats Crop

Hay shows a loss of almost 5,000,000 tons. Much of the early hay, as well as pastures west of the Mississippi, was hurt seriously by the drought; and the feeding problem here is a serious one. Late rains, reviving pasturage and meadows, have permitted a fair, but by no means liberal, second cut.

The world's wheat crop is generally estimated as the second greatest ever gathered, being 3,483,000,000 bushels. There have been severe losses in such important countries as Russia, Canada and in our own United States compared with 1909. There has been a heavy reduction in France, which will make that country a free importer. Wet weather in Germany has injured the crop and it will have to import dry wheat to mix with it.

While the wheat crop of the world is large, there is every indication of a good demand for it. There are eminent authorities who insist that produetion is not equal to demand and that a close adjustment between the world's needs and the available supplies will continue until cultivation brings about greater yields per acre.

JAMES A. ROBINSON.

Good Cotton Crop—Good Prices

THIS year's cotton crop will undoubtedly be greater than that of last year. The acreage is greater and the condition better September 1st. These facts are disclosed by the investigations of the Department of Agriculture. Adverse conditions early in the season threatened seriously to diminish the yield, but better times came and there is no longer much doubt that the crop will recover completely.

Reports have been received from the entire cotton belt. They show the condition on September 1st to be seventy-two per cent. of normal, which is just nine per cent. better than on the same date a year ago, and better than it was in June. It is not so good as in July because of the droughts in August, but the damage done then came too late materially to affect the yield.

The acreage in 1910 is greater than that of a year ago, by almost 1,000,000 acres, or nearly three per cent. Combining the increased acreage and the superior condition, the result will be more cotton by nearly 300,000 bales—the more optimistic estimate is as high as 500,000 bales.

In 1909 the cotton yield was 10,363,240 bales, grown on 32,292,000 acres, and produced in a season even more unpropitious than this. This year the acreage is 904,000 acres greater with a better September prospect. It seems reasonable, therefore, to expect that the crop will materially eclipse that of 1909.

The Oklahoma crop is in better condition than that of any other state save California. The California production is too small to greatly affect totals. In Oklahoma the average is eighty-five per cent. of normal—exactly ten per cent. better than the last ten years' average.

Louisiana makes the poorest showing. The condition of the cotton is only sixty per cent. of normal, nearly ten per cent. behind that reported a month ago, and eleven per cent. under the ten-year average. The planters have had a bad August. They first had too much rain and then too little. The Carolinas, Georgia, Alabama and Mississippi have been more fortunate. They are all in the same class, in so far as the present condition of their cotton is concerned. North Carolina is a little ahead of South Carolina. The other three states report a satisfactory outlook.

Arkansas and Missouri have no cause for complaint. Their crop is above the average. That of Texas has deteriorated within the past month more disastrously than that of any other state. Its condition is thirteen per cent. worse than it was in July with only a slight prospect of recovery. Even as it is the crop is nine per cent. nearer normal than is that of Louisiana.

Texas always leads in acreage and this year it has increased it by more than four per cent. The acreage increase in Oklahoma is more marked than is that in any other big producer, being fifteen per cent. As a matter of fact all of the cotton states increased their acreage, except Mississippi and Louisiana. In the case of the former there was a reduction of four per cent. and in the latter only one per cent. Among the smaller cotton-producing states, Virginia leads in increased acreage, with an increase of thirty per cent. Florida comes next with an eight per cent. increase. California, a new producer, has 18,000 acres.

Of course, there is speculation as to the price of 1910 cotton. Everybody has a guess, but nobody knows; but it is generally thought that prices will remain high, production, while large, not being large enough to bear the prices. Demand is increasing and will continue to increase. It is not expected that it will reach twenty cents again, but no reason is seen why our ten and a half million bales for next year's market should sell for less than fifteen cents. As long, however, as cotton is at the mercy of speculation, prices will be governed by other conditions than supply and demand. Supply and demand will be factors, of course, but they will not be the only factors. That is why planters hope for a day when gambling in the staple will be outlawed.

A better grade of cotton is being marketed now than ever before, a still better fiber will be produced in the future. Cotton culture is improving through seed selection, better methods and soil improvement. It is expected that fifty per cent. more cotton than now will be made per acre within the next few years. As production per acre increases, the total acreage should decrease, the producers going more into corn, grass and live stock. The Bureau of Plant Industry thinks the extermination of the boll-weevil certain to come, regarding the insect as even now under control and its ravages limited. And sizing up the property at stake, the fight of the Department of Agriculture against the boll-weevil remains as the greatest achievement of the department in any section of the country.

J. FRED ESSARY.

Foreign Crops

THE optimistic reports about the foreign crops which were received from nearly every quarter of the globe are not being borne out by the latest advices. Such adverse conditions have prevailed in many countries that a season which, three months ago, was expected to be a record-breaker will fall far short of that mark.

The deterioration of wheat is responsible for this, and the effect is wide-spread. With the largest area of wheat ever planted it seemed reasonable to suppose that the harvest would be the heaviest. The normal world's area under cultivation is about 235,000,000 acres,

[CONCLUDED ON PAGE 10]

Debasing America's Grain

An International Swindle That Reacts on Every Farmer—By G. C. Streeter

THE greatest crime of the grain trust is the adulteration of grain, a practice that has debased the standard and lowered the price of our grain, decreasing the value of every bushel we grow and causing us an annual loss of millions. There has been a continual protest from American and foreign millers against the unreliability of grades at our great terminal elevators. No sane American miller is willing to buy for use the contract grades delivered on the out-inspection of the Chicago warehouses, and no foreign grain-buyer will take a Chicago inspection certificate for what it purports to be.

I have been in the milling business and I am familiar with the stuff delivered as contract grain in Chicago. I would no more think of trying to make good flour out of Chicago contract grain than of any other form of screenings, dirt and low-grade wheat. This is so well known that our millers have come to accept it as inevitable and expect nothing else. They buy from sample and try to get the grain like the sample. Mills obliged to buy Chicago contract wheat send their own inspectors to watch the loading of the cars or boats. In spite of vigilant watching the elevator men often succeed in "doping" or plugging the cars.

The Chicago terminal elevators have long ceased to be warehouses of a merchantable commodity intended for consumption. They are of two kinds—public and private. In the public elevator is stored grain that may be delivered on contract; in the private it is graded to pass as contract grade when it comes out of the public elevators. When a car is received, if of the lowest standard of contract grade, it goes into a public house, but if it is above or below that lowest standard, it goes into the private elevators or "grain hospitals" to be reduced, or brought up to that standard. Here the dirty wheat is cleaned and clean grain is mixed with dirty grain. Smutty, scabby and other forms of diseased wheat are cleaned, clipped and polished until in external appearances they will pass as contract grain. The light and undesirable grains are mixed with heavier and better grains, and then, under the not-too-watchful eye of a friendly inspector, this undesirable mixture is passed along into the public elevators to become contract grades, deliverable on grain contracts made on the board of trade.

Remember this: In a "grain hospital" the object is to make the lowest grade of contract grain that will pass inspection into that grade. I want to reinforce this point by the testimony of John J. Stream of J. C. Shaffer and Company, a member of the combine testifying before the Interstate Commerce Commission, who stated:

"If grain does not grade, we put it into the cleaning-house, and if we can ship it to better advantage, we ship it without putting it into the public house; if we can not, we make it into contract grade."

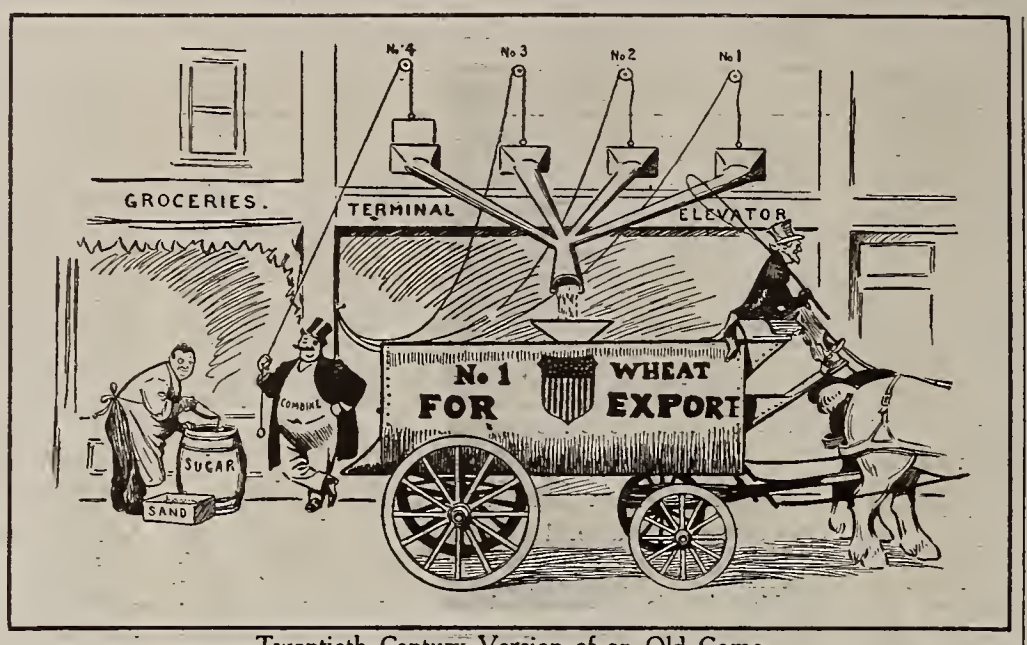
Plunder Going and Coming

The Report of the Committee on Agriculture and Forestry, submitted to the Senate, January 15, 1909, by its chairman, Senator Dolliver, contains this explicit and forceful statement:

"As a result of this domination and control (by the combine) has grown what is known as a system of rigid and easy inspection—that is, rigid inspection into the elevator and easy inspection out of the elevator. This enables the terminal elevators to buy in grain, generally at a grade less than its true grade, mix it with inferior grain and sell the same out at a grade higher than the true grade, thereby making the value of two grades. The result of this system is that the producer and the independent shipper are beaten out of one grade of grain. The consumer, by having imposed upon him a poor grade of grain under a certificate indicating a higher grade, is compelled, after being defrauded several times, to pay a lower price on a given grade knowing that the grain received will not measure up to the certificate, and as the value of the grain on the farm is fixed by the price paid in the field of consumption, it follows that this unjust and fraudulent system drives the value of our grain downward for every grade.

"This is clearly established by the testimony of foreign importers, where, it is said, on account of the frauds perpetrated in certifying grain for export at a higher grade than it is entitled to receive, American grain of a certain grade sells for several cents per bushel less than Canadian or Argentine grain of the same grade.

"Many of the mills of the country must



Twentieth Century Version of an Old Game

The sugar-sander and the grain-king are birds of a feather—but how much blacker of feather is the one whose cheat debases not his own, but the nation's trade

purchase at terminal elevators. They have long since ascertained that no reliance can be placed on those grades, but in many instances they must not only pay for the mixture concocted in those elevators, but they must pay for the grade at which it is improperly certified. It is said that no purchasers for use will buy their grain on the Chicago certificates.

"As an example of the effect of this system, we cite one single fact established by the testimony before the committee. An attempt was made a short time ago on the part of the Baltimore grain interest to divert export trade from the port of New York to the port of Baltimore. This was accomplished by greater liberality in inspecting into the elevators at Baltimore. The exporters got rather heavily loaded. The foreign demand did not meet their expectation and considerable losses were liable to follow. They met these losses by a very simple device—that of raising the grade of the grain and putting it on the market at a higher grade than it was entitled to. The dealers prevented losses to themselves by this transaction, but entailed many times the amount of their savings by depreciating the value of our high-grade grains.

"The evidence taken before the committee established beyond question the fact that a systematic determination on the part of exporters not to export our highest quality of grain without mixture, because we would thereby establish such a high standard of quality that we might not be able to meet the demand; and because of this, our high-grade grain must suffer a depreciated value to the extent to which it is adulterated."

A committee appointed by the Board of Trade of Chicago to investigate the trade adulteration and "plugging" of car and cargoes in the elevators of Chicago makes this significant statement:

"This market has long suffered from a lack of public confidence in the integrity in the grades of grains held in public warehouses. . . . The mystery as to how such poor grain could have been inspected into the houses is possible of explanation if the 'plugging' system has been in vogue in days gone by."

Our Adulterated Grain Abroad

Consul Thomas R. Wallace, United States consul at Krefeld, Germany, in his report says:

"The grain trade from the United States with this district has been declining for some time, and if such dissatisfaction becomes general throughout Europe, the losses to the people of America in this important branch of their export trade will be enormous. To gain some idea of the causes of the complaints regarding the grain exported from the United States I have made personal inquiry among the millers and dealers in these products, and am told that the conditions complained of here are the same all over Europe.

"The dealers say they have suffered excessive losses through the purchase of grain from America by its not grading up to the standard given in the inspector's certificate in kind, quality or condition when received. Wheat sold as good winter wheat and so certified to by the inspector is very often found to be new wheat mixed with old and often wormy wheat. Grain often arrives in very bad condition. Wheat purchased as new is found weevily—very good wheat with badly damaged grain mixed with it.

"I am informed that such conditions have become worse, that the purchaser here does not receive what he buys and that no reliance can be placed on the inspector's certificate. The result is the miller has ceased to buy American grain for his mill and the farmer for his stock. It is further said that grain received from South America, Russia or Roumania arrives in good condition; that received from the United States alone being bad."

Consul-General Robert P. Skinner, of Marseilles, France, makes the following statement:

"It is highly desirable that certain facts in regard to American grain-selling methods be given immediate and wide circulation and that something be done, either by action of Congress or by the concerted action of American commercial bodies, to reform or rather standardize the system under which the great cereal-exporting business has been created.

"Although no two ports in the United States may absolutely agree as to the descriptive terms to be applied to a given grade of wheat, although previous shipments may have been of obviously different quality, if the certificate delivered conforms to the grade ordered, the buyer must accept delivery.

"Of late years the murmurs against this system have been increasing in Europe, and whereas a short time ago they took the form of isolated private complaints that goods did not always conform to the certified grade, they now take the form of organized protests."

Robert A. Patterson, Chairman of the European International Committee on American Grain, a leading English miller and President of the Corn Exchange of Great Britain and Continental Europe, on February 15, 1908, writes a long letter to the President of the United States, protesting against the highly unsatisfactory grain foisted upon the exporter by the terminal elevators. He makes this pointed statement:

"The result is that American grain suffers as regards price when in competition with grain from other countries."

He also says:

"There has been for some years past a general consensus of opinion among European buyers of grain that the operation of the present system of certifying grain for export is increasingly unsatisfactory, and whatever may be its merits for the purpose of domestic trading, it no longer gives the European buyers the confidence and protection which is necessary in a trade where the only guarantee for reliable quality in condition in exchange for the buyers' money is a paper certificate."

Grain Certificates a Joke

The Rotterdam Corn Trade Association under date of February 20, 1908, wrote to Senator McCumber, condemning in unmeasured terms the quality of the grain export under false certifications. I might multiply evidence on this particular point, but what's the use? The buyers of grain know the situation. A grain certificate is a discredited document.

S. H. Greeley, testifying before the Senate committee having charge of the Federal Grain Inspection Bill, said:

"Why, sir, no man would ever think of buying grain out of a public elevator or taking grain out of a house any place, unless he has one of his private representatives at his own expense come up there and pay the bill and have the grain examined before it is loaded into the car or boat. We all have our own private samplers and inspectors to watch the grain. We have to be on guard every moment. There is nothing about an inspection certificate in the city of Chicago but a huge joke."

The condition in other terminal grain markets at the elevators controlled by the trust and their allies is just as bad.

Let me give you just a few specific examples, cited in statements made before a Senate committee:

"During the year 1906 a prominent exporter had accumulated in his warehouse and elevators something like thirty thousand bushels of wheat-screenings, chicken-feed, dirt, etc., which he attempted to mix with No. 2 'hard' wheat going from New Orleans to Europe for export, but on account of some difficulty with the inspector at that port was prevented from doing so, but subsequently shipped all of this low-grade stuff from his houses in New Orleans, Chicago and Fort Worth to Galveston, and there mixed it with No. 2 'hard' wheat for shipment to Europe, and for which Galveston certificates were issued calling for a grade of No. 2.

"A certain well-known elevator company of Kansas City, Missouri, during the year 1905, made a statement subsequent to the burning of their elevator that there should be no deduction made in their settlement with the insurance companies for the payment of their losses on account of any shrinkage that might have occurred during the year by cleaning, clipping, etc., for the reason that the cleanings and the clippings and the dirt taken from the wheat during that period was invariably loaded back into the bottom of the cars, upon which was loaded No. 2 wheat for shipment, not only for export, but for domestic purposes, and, notwithstanding the fact that the board of trade was fully advised, the matter was winked at, this man being one of their directors."

Some Eloquent Figures

A committee appointed to consider this matter by the North Dakota Bankers' Association embodied in its report the following:

"In examining the statement above referred to, of grain received and grain shipped out of the terminal elevator we were able to get a report from, we found that during the three months covered, the report showed the following grain received and shipped out:

Shipped In

Grade	Bushels
No. 1 Northern	99,711.40
No. 2 Northern	141,455.20
No. 3	272,047.20
No. 4	201,267.20
No grade	116,021.10
Rejected	
	890,245.10

Shipped Out

Grade	Bushels
No. 1 Northern	196,288.50
No. 2 Northern	467,764.00
No. 3	213,459.50
No. 4	None
No grade	None
Rejected	None
	877,512.00
On hand (estimated)	12,733.10
	890,245.10

"What an eloquent story is told by the above figures. The fact that nearly one hundred thousand bushels more of No. 1 Northern, the highest grade taken in, was shipped out than was received, speaks so loud against the present system and rules of inspection that it is simply unnecessary to go down the line and call your attention to the fact that nothing lower than No. 3 was shipped out."

Is it any wonder that the dishonest grades of the elevator trust cause foreign buyers to discriminate against American wheat? This perversion of the public elevator has debased the value of every bushel of American wheat offered for export and consequently of every bushel of grain you grow. What are you going to do about it? Anything?

Anything which debases and depreciates the value of your crops necessarily depreciates the value of your farm which ultimately depends on its produce.

So this concerns you. It can be remedied, and when the farmers once understand the situation and demand redress, it will be remedied. Federal inspection of meats has restored confidence in our discredited live-stock products. Honest public inspection, whether state or federal, will do the same with our grain. But the inspectors must not be named by, nor connected with, the grain-dealers. It looks like a job for the general government.

Around the Farm

Fact and Opinion Contributed by Progressive Farmer

Can't You Take a Joke?

Four people have called my attention to the picture on first page of Farm and Fireside of August 10th. It is supposed to represent an old farmer driving an automobile. One subscriber says: "Such a picture is better suited to one of the banking journals, which are having spasms because farmers are buying automobiles instead of leaving our money in the banks for a display in their reports and to loan at more than double the interest they pay us."

Well, the old chap seems to be driving like Jehu, just to see her go. I have met hundreds of farmers in autos, but never such a bird as the one in the cartoon. I met one "tearing up the track," but he was taking a thresherman to town for repairs while a threshing outfit waited. That fellow was hitting the high places, and though I was going at a fair clip, he passed me going back with the repairs. He appeared to be master of his machine. All farmers I know drive at a moderate rate, except when in great hurry! They know that fast driving means fast wear.

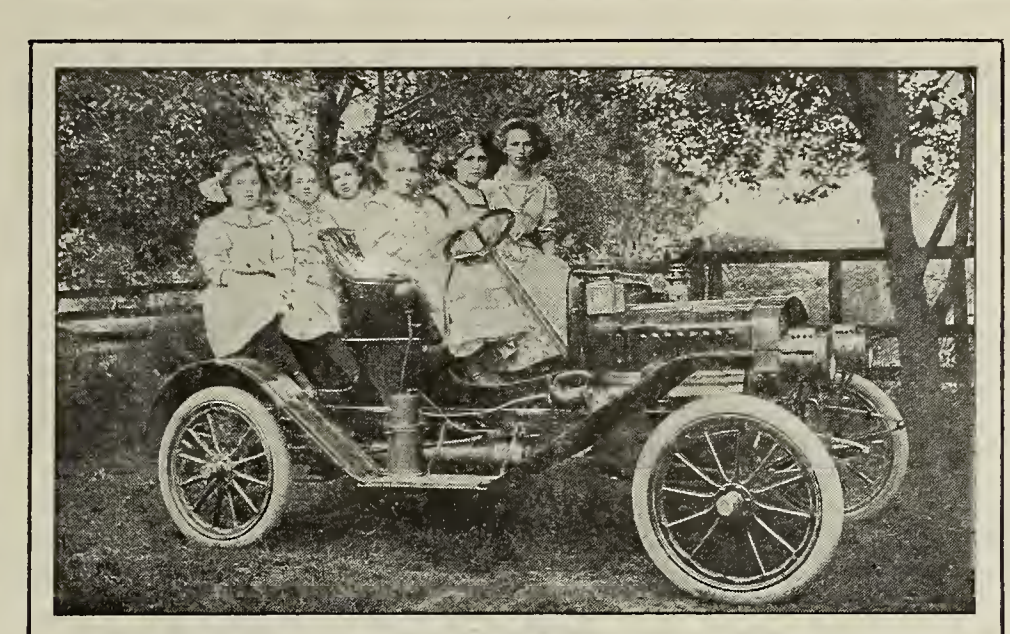
I have met farmers in wagons and buggies who refused to give an inch of the road, simply because it was an auto. One compelled me to run over a pile of osage-hedge brush to avoid a collision. I have heard of several who declared it their intention never to give an auto an inch of the road. Those chaps are about like the city men who zip along and pay no attention to scary horses. These two classes are responsible for most of the accidents. When driving my horse or auto, I make it a point to give every other driver the largest share of the road, and I would like similar treatment.

Those who feel edgewise at the cartoon may be pleased with the photograph of my little daughter starting out to take some friends for a spin. Nothing pleases the youngsters more than an auto ride, and I often see our doctors' autos loaded with children as they visit patients.

A writer says that the way to keep the boys on the farm is to board the schoolma'am. Buying an auto beats that. It means sightseeing and fresh air to every member of the family. One hot day I stopped in front of the home of a friend and called to his wife to come out and take a fifteen-minute jog to a neighbor's with me. She was suffering from the heat and came out without a wrap. I sent her back for a shawl. "What in the world do I want with a shawl a hot day like this?" she exclaimed. I told her she would learn when we started. Before I had gone a quarter of a mile she had that shawl wrapped tightly about her. When we got back, she said: "I never got so much fresh air in so short a time in all my life." That's it. A closely housed, hard-working woman can get more fresh air in a mile run than she has had all day in the house and all evening on a porch. And it does her a world of good. One woman told me that a mile jog in the evening of a hot day was far more exhilarating than a perfect bath.

There is a fascination and exhilaration in auto riding that is inexplicable. Little tots and grandmas alike seem to fairly delight in it. And every ride makes them want another. I used to find it a difficult matter to get the boys to clean up the surrey, but they will rub and polish the auto with the keenest pleasure.

Fred Grundy.



A Sensible "Joy-Ride"—Mr. Grundy's Daughter Takes Her Friends for a Spin in His Machine

Balancing Soil Rations

When we consider the composition of stable manure, we find a large amount of carbonaceous matter and a comparatively small amount of plant-food that is considered valuable in a commercial fertilizer. There is about ten pounds of nitrogen, ten pounds of potash and half as much phosphoric acid as either of the others in an average ton of stable manure.

The complete fertilizers on the market usually contain much more phosphoric acid than either of the other two great plant-foods. Phosphoric acid seems to be more generally deficient in soils than either potash or nitrogen. If stable manure is to be as effective in balancing up the plant-food supply as commercial fertilizers are, it seems that stable manure needs balancing with a phosphate.

Many of the acid phosphates found on the market contain as much as thirty-five per cent. of gypsum or land plaster, which has the power of fixing nitrogen and preventing its escape into the air as ammonia. It is therefore economy to mix acid phosphate with the manure, quite aside from the value of the phosphate itself.

The Ohio Experiment Station found that the producing power of a ton of stable manure was almost doubled by mixing forty pounds of acid phosphate with it. Last year I applied stable manure on a part of a corn-field, acid phosphate on another part, and on about half an acre I used both the stable manure and acid phosphate. Where the manure was used alone and where the phosphate was used alone there was but little difference in the yield per acre, but where both were used together there was an increase considerably exceeding either of the others.

A. J. Legg.

Irrigation Settlers, Take Warning!

A disastrous mistake often made by settlers on irrigated lands is the taking of too much land. This has caused failures, hardship and suffering, which the settler might have avoided by taking a small tract.

On one government project in New Mexico the settlers are petitioning for relief from their obligations, declaring that they are unable to pay the small amounts due. These settlers usually purchased one hundred and sixty acres of land, whereas forty or eighty would have been sufficient. Nearly all had funds, but in their eagerness for large farms they expended most of their cash on a quarter section, trusting to the land for a living and future payments. This trust proved deceptive, for it is seldom that irrigation farming by inexperienced men proves successful during the first season.

So at the beginning of the second season the settlers are facing water-right and maintenance charges of about four dollars an acre—a fearsome prospect for the farmer without means trying to hold a quarter section. Had he been content with forty acres, husbanding his original capital against unfavorable contingencies, he would be able to view the situation without alarm. The land is all hypothecated to the government, thus making it a loan question. The case mentioned is typical of every new irrigation section. A desire to appropriate everything in sight while it is cheap leads to the wreck of plans for a home. Unscrupulous real-estate dealers often unload land upon the settler to the limit of his last dollar for the sake of commissions. They point to the increase of values in other sections and talk glibly of the wisdom of securing plenty of land while it is cheap. The ruin of the purchaser means nothing to the agent; indeed, it operates to his advantage, for he is thus enabled to sell the tract again and earn a second commission.

Settlers in irrigation sections should understand that large holdings are not necessary, as in the prairie states under rain conditions. A vast amount of work is necessary if even a small field be rightly farmed. Haphazard and scratching methods lead to failure with more certainty than where Nature takes care of the watering process. Unless it is intended that every acre and every square rod shall receive constant, individual attention it is better that it should not be touched at all. Always there is the water tax to be reckoned with, and the payments must be in cash. Whether under a government or private system, the assessments are inevitable and mandatory. There can be no evading or deferring. The water commissioner holds the destiny of the farmer in his hands.

A little farm, carefully tilled, in an irrigation section, will yield an ample income for the ordinary family. Later, when there is cash in sight, land may be added if desirable. For the most part, however, the small farm can be more economically administered and will prove the most profitable.

Edmund G. Kinyon.

* * *

Dry farming, tersely defined, means "the development of agriculture by the utilization of scientific methods where irrigation is impracticable or impossible."

Valuable Fertilizer Facts

The following valuable table is taken from Farmers' Bulletin No. 398, issued by the United States Department of Agriculture. It relates to the kind of fertilizers commonly used and the approximate quantity of fertilizing constituents in one hundred pounds of each.

Fertilizing Material	Availability of Plant-Food	Kinds and Quantity of Fertilizer Constituents in 100 Pounds of Fertilizer		
		Phosphoric Acid	Ammonia *a*	Potash
		Pounds	Pounds	Pounds
Nitrate of soda	Readily available	.....	18 to 19	.....
Fish-scraps	Medium availability	6 to 10	8 to 11	.....
Dried Blood	... do	.....	13 to 15	.....
Cotton-seed meal	.... do	1 to 2	6.5 to 8	1 to 1.5
Slaughter-house tankage	.... do	7 to 11	8 to 12	.....
Acid phosphate	Readily available	13 to 16	.....	.....
Basic slag	Medium availability	15 to 17	.....	.....
Ground bone	Slowly available	22 to 25	2 to 4	.....
Raw rock phosphate *b*	Very slowly available	26 to 36	.....	.....
Muriate of potash	Readily available	.....	.....	48 to 52
Kainit	.... do	.....	.....	12 to 13
Sulphate of potash *c*	.... do	.....	.....	46 to 50

a Multiply ammonia by 0.82 to obtain its equivalent in nitrogen.
b This material should be used only when the soil is well filled with humus.
c Sulphate of potash may be used to best advantage for potatoes.

J. W. Jr.

A Calling Worthy of Pride

This article is not intended for the experienced, scientific farmer. Rather I have a word to say to the young man who contemplates becoming a farmer, respecting mistakes often made in estimating qualifications for the enterprise.

There is a false opinion prevalent that a trade can be sufficiently learned in a few months, or a year at most. In order to become an adept in any calling, a person must get some of his lessons in the school of experience. Let him be ever so familiar with theories in all of the details, he is poorly qualified to secure success without the knowledge that comes only with practice.

It is only the absolute and pressing demand for farm laborers that gives so many poor workmen employment, and while the inferior laborer gets employment, he is not getting such wages as the times demand. A first-class farm workman can secure almost any price within the bounds of reason and can hold a position permanently so long as there is work to be performed, while the underling is constantly changing, and when the time comes for reducing the help, he is the first to be discarded. What I first wish to enforce upon the young men at this time is the importance of getting a full and thorough knowledge of the business chosen as an occupation, be it farming or any other occupation.

Some think that, after they have obtained something of an insight into a trade, they can get better wages by launching out elsewhere than by continuing with their instructors. This is sometimes a fact, but usually for every dollar gained in the first two years after making the change, ten will be lost in the subsequent two, for the simple reason that an unskilled man, attempting the work of a skilled man, seldom becomes efficient as a farmer and, therefore, never receives a first-class farmer's wages, if working for wages, or never makes a great success for himself.

Further than this, to be successful as a farmer, a person must be strong in his self-respect or, in other words, he must feel that he does not degrade himself by his occupation. Right here we meet with one of the very worst follies of which young men are guilty. An idea has gained very extensive currency, to the effect that a farmer is not as respectable as people who engage in lighter callings or sometimes no calling at all. A young man thus impressed is in no condition to enter successfully upon a career of usefulness as a farmer; he sets to work, if he makes an attempt to master the trade, as it were, with a "mill stone" around his neck. He does not respect himself, his calling, nor his associates.

He is without any stimulus that would lead him to the development of his better faculties and he goes about his business feeling like a drudge, rather than as an honorable and high-minded aspirant after a laudable and praiseworthy object.

This fear of losing dignity is spreading to an alarming extent. Comparatively few young men are becoming farmers, but, instead, are seeking other fields of labor. The reason for this deficiency of young farmers, as I view the matter, is not due to insufficient remuneration for the labor, but to pride and in many cases to pure laziness. I surely think it is better to be a good farmer, even though the farm be very small, than to be a poor lawyer, doctor, bookkeeper or clerk. Indeed a man can be great in anything if he has the right stuff in him, and I consider that in no place on earth are there greater opportunities to-day than down on the old farm.

R. B. Rushing.

Points for Producers

Maryland produces more tomatoes than any other state, much of the crop going to the canneries.

The leading topic for discussion at the agricultural conference held at the University of Minnesota during the summer was "Should Agriculture and Home Economics be Required as a Basis for All Teachers' Certificates?"

Statistics of unquestionable accuracy show that the production of all kinds of crops is not keeping pace with the increase of population. There will be, therefore, an increase in land values as well as in the price of farm products.

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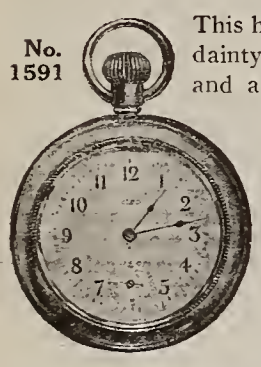

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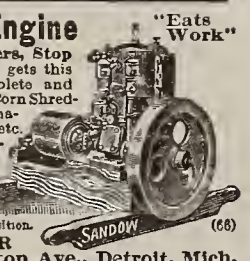

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Gardening---By T. Greiner

Celery for Winter

For a really enjoyable vegetable any time in winter, give me celery. We have it quite good now. We have it better in winter.

We do not blanch the winter celery much before storing it. We leave it out until the latter part of October, for a light frost will not hurt it. Severe freezing would. Above all things be sure that it is perfectly dry when you gather it. Celery handled and stored while wet with rain or dew is sure to rot. So it is if water is put. or allowed to get, on the tops of stored celery. If stored in a warm, dry and light place, it is sure to wilt.

Kept moist at the root, dry on top and stored in a cool, dark, but well-ventilated, place, it has a chance to keep. But it is so good that we can afford to take special pains with it. Any cellar good for keeping potatoes or root crops is good for storing celery. Select a dark corner. Put some moist soil, sand or muck on the floor. Take up the celery with some soil adhering to the roots. Trim off some of the older outer leaves and pack the roots rather closely together, upright, upon the floor and pack some more moist soil or muck about the roots, covering them pretty well up. Use them freely after they have made some new white growth. Use them all the more freely when you notice first signs of rot.

Chicory Possibilities

I do not believe any other vegetable could have given us so many delicious messes of green stuff as what we got from a boxed-off space three by three feet under a cool greenhouse bench two years ago. I planted it with chicory roots, using nearly two bushels of roots with ends trimmed where too long and tops cut back, leaving only about an inch above the crown. They were planted upright, rather close together in the row and the rows only a few inches apart. The box was then filled with loose litter, a mixture of sawdust and soil. Spent tanbark is usually recommended for this, but the mixture mentioned did very well. The crowns of the plants are thus kept covered perhaps eight or ten inches deep. The new growth is white, and very tender and sweet. The product is something akin to what is known as witloof, and it is almost equal to asparagus in regard to its flavor.

We took mess after mess from that little space, all we wanted to eat, and we gave to our friends. This year I shall try the chicory, also, for outdoor blanching like celery, both under boards and under earth banking. It offers great promise.

Growing Brussels Sprouts

A lady reader in Lackawanna County, Pennsylvania, inquires about methods of growing Brussels sprouts. She says she tried to raise them last year, but the little heads were so loose that she did not use them. Brussels sprouts are not the easiest vegetable to raise, but one that is good when you get it, provided that you like cabbages and the like. Success in raising it and getting the little hard heads that are wanted, depends as much on the season as does success in raising any other member of the cabbage tribe. Sprouts like a cool and moist season and strong soil that is well supplied with the mineral elements of plant-food. Members of the cabbage family are especially hungry for potash, and applications of muriate of potash or of wood-ashes, if these materials are available, are very effective. Sprouts also require a fairly long season, and the little heads are improved in tenderness and quality by frosts. Procure seed from a responsible, respectable seedsman and sow it in your latitude not later than May 15th. Transplant about the middle of June and give it the same general treatment as you would late cabbages or kale.

Celeriac is Good

Many persons like celeriac, or knob (turnip-rooted) celery. I usually plant a few, anyway. The root, when boiled and sliced, makes a good addition to cabbage salad. It is somewhat more hardy than our common celeries. I saw plants in an Ohio garden, some years ago, in December that were earthed up for blanching and then covered with litter, for protection, and they came out fine. I am going to hill up the one row I have in my garden this year, protect it with litter and boards, and see how long I can keep it outdoors in edible condition.

Anti-Weevil Scheme

Mrs. E. J. P., Virginia, sends the following plan for killing weevils in seed beans. She writes:

"I have noticed Mr. Greiner's recommendation of the bisulphid of carbon treatment for seed beans in Farm and Fireside. Here is another way, which I have used many years with perfect success every time.

"Simply grease the beans. But this must always be done just as soon as they are threshed out of the pod. Put the beans in any convenient vessel, pour a small quantity of lard or any other grease or oil on them and thoroughly mix them up until all are greasy. They can then be put away and there will never be a weevil in them. This result is brought about, I suppose, on much the same principle as the prevention of an egg's hatching when it is greased."

The weevils eat into the bean when they are very minute worms (larvæ) and the bean grows completely over the hole they bore in by. If left alone the larvæ develop in the bean into adult weevils and eat almost the whole inside of the bean before they emerge. The greasing would seem to work by excluding air and thus preventing the weevils growing and developing—by smothering them, so to speak.

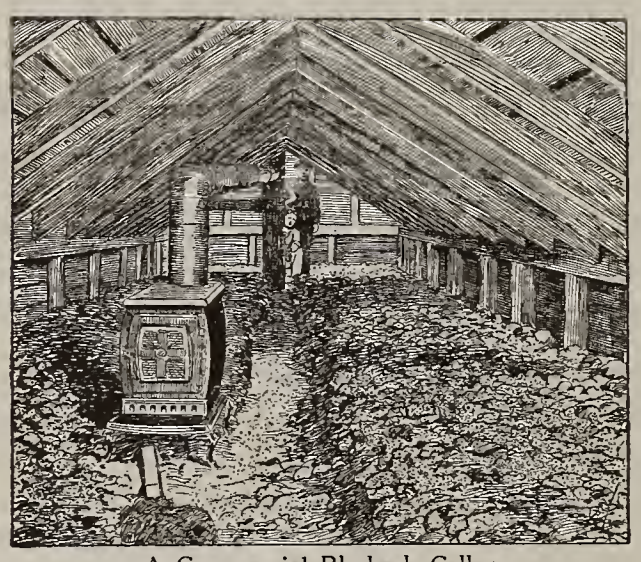
More About "Pie-Plant in Midwinter"—By J. E. Morse

In Farm and Fireside issue of August 10th, Prof. A. J. Rogers writes entertainingly under the above caption. But, by way of throwing some side lights upon the subject, the writer desires to state some facts from the viewpoint of the commercial growers.

As to the "hill" method of forcing referred to in the article, time was when it was followed quite largely, and especially in the Eastern states where quite large areas were operated, even to the extent of using the ordinary cold-frames and hotbed sash. That with its variations was the only system then known and was really a make-shift whereby a little time was gained in spring over the ordinary outdoor grown. The small margin of profit, however, after deducting expense of time and labor, coupled with the short time actually gained was not particularly attractive; but being the only method at that time available the growers accepted the situation.

The second method, forcing in cellars and under greenhouse benches, mentioned in the article is chiefly what we wish to consider. Of forcing under greenhouse benches very little need be said as so few are equipped with these facilities. The forcing in dark cellars or sheds is comparatively so inexpensive and so easy and simple of management that no home in the land need be without this delicacy from January to the maturity of the outdoor grown. It is well to state, however, that the same general principles apply in both cases.

The illustration shows a well-constructed cellar built primarily for this purpose; but when not thus occupied is utilized for general storage. Two crops of pie-plant were grown in this cellar in one winter, which sold for one hundred and sixty dollars. An adjoining neighbor used his house cellar, in which several hundred bushels of potatoes and other vegetables were stored; and the crop of rhubarb thus grown in the vacant space sold for one hundred and forty-four dollars and all the heat used was from two large kerosene-lamps of ordinary make.



A Commercial Rhubarb Cellar

The picture of the house cellar simply illustrates how such a corner may be shut off from the main part by tacking old carpet to the ceiling and allowing it to fall to the cellar bottom. This is a flash-light from my own cellar where the bed was heated by a small hand lamp and lantern. By setting in roots at different times the home supply can be held the entire winter through.

The largest single crop I have seen grown in a single bed was sold for five hundred dollars and was raised in a shed made of old boards covered with coarse manure and straw, and heated by a single stove.

The roots are plowed or turned out with the spade and thus left undisturbed until frozen. No piling of the roots is necessary, but the work should be done late in the season and when the ground is quite damp or even wet so that all the soil possible will adhere to the roots. When thoroughly frozen, the balls of earth and roots may be handled like stones and no amount of snow or ice will injure them; in fact, the more, the better, for when thus placed in the cellar little or no watering is required, other than a kettle of water kept on the stove or furnace.

The temperature will not vary in the cellars as in the greenhouse. Forty-five to fifty-five degrees as mentioned in the article is not high enough for quick work. Sixty-five to eighty is not too much where quick returns are desired. The higher temperature will produce a crop much quicker, more tender and much finer color. However, if desired, the lower temperatures may be used and the crop is thus held in check.

The root supply is, of course, a problem, but one that may be solved by judicious management and forethought. In the early writings upon the subject this contingency was pointed out, strongly emphasized and the remedy suggested. The plan of forcing the roots in winter, transplanting for the summer and forcing again the following winter is not the usual practice among growers. The only practical plan is to allow them to grow two or three years before again forcing, when they will have gained their former vitality and will yield a good crop.

The plan of depending upon seedlings of only one year's growth will answer nicely for experimental purposes, but for commercial growing would not be practical for two very potent reasons. First, in the few months' growth from the seed the roots will attain but little size under best possible conditions. They must have size and storage capacity in order to produce stalks of paying size, and they must have the eyes or buds to give the quantity or number of stalks. In the few months' growth allowed them they could by no possibility other than a miracle grow to sufficient size or produce eyes enough to give a paying crop. Second, no variety save Wyatt's Victoria reproduces true to type, but, like apple-seeds or potato balls, produces any and everything. So there would be nothing dependable but the one variety mentioned.

Fruit-Growing

"His Work Goes On and On"

THE announcement of the death of Prof. Samuel B. Green came as a shock to the many readers of FARM AND FIRESIDE who have for years read his writings. Something will be missed from the columns for a long time by the old readers. How much good he did by his writing, lectures and experiments no one can estimate.

When I read the notice of his death, I was sitting on the lawn at my North Dakota home in the shadow of a tree. I planted this tree twenty years ago. It was planted according to Professor Green's directions. The tree was received from Professor Green. For twenty years we have had comfort, protection and enjoyment from that tree. I commenced to look around me. I saw birch, willow, poplar, pines, spruces, cedars, spirea, lilac, honeysuckle, caragana, snowballs, rose-bushes, etc. They were all received from Professor Green. They were all planted according to his directions. In the garden were vegetables. They were planted after first consulting Green's Vegetable Gardening. There were several fruit-bushes and about one hundred and fifty apple-trees. They were planted according to Green's Amateur Fruit-Growing. Many of the trees were from roots and scions furnished by Professor Green and grafted in his greenhouse. I felt as never before how much I was indebted to him. Then I thought of the fact that I was only one of the large number whom in the past two and twenty years he had instructed and sent trees and shrubbery to. Who can estimate the good he has done?

I remember his first lecture to the students in the newly established School of Agriculture in Minnesota, in 1888. He came into the class-room with a few apple-tree twigs in a grape-basket he was carrying on his arm. Without any formality he commenced to lecture on apple-growing. It was a practical talk from beginning to end. During that lecture we learned to know Professor Green. I was in his classes more or less during the following six years. I was co-worker with him the succeeding eleven years. The impression received at the first lecture has remained unchanged during all these years. He was always the same. He was frank, free and open-hearted.

Last spring, twenty-two years after that first lecture, several members of that first class gathered in his office. He was the only member of that first faculty remaining in the institution. We talked over olden times. It was pleasant to visit the old teacher and friend. Little did we then think it would be the last opportunity we should have to meet him. He was so strong and vigorous. He seemed to have a long life of usefulness before him.

On leaving the university after graduation to take up experimental and lecture work, he said to me, "Make your work as useful as possible." That principle must have guided him in his own work. He made his own work useful. While Professor Green is laid to rest, the influence of his work will go on and on.

T. A. HOVERSTAD.

Pecans for Profit

PECAN-GROWING is a little in disrepute. Not that there are not plenty of growers all through the South who are making good and legitimate profits from pecans, but the exaggerated advertisements of land companies have produced a reaction, and many new-comers from the North, in particular, are shying away from the business. There is no doubt that many of the attempts at wholesale pecan-growing in unsuitable locations or with unreliable stock are going to be disastrous failures. Inexperienced persons need to look several times before leaping into pecan culture, but, given a favorable location and intelligent management, a pecan-orchard is an investment hard to beat.

The pecan belongs to the hickory family and the large varieties grow from seventy to one hundred and seventy-five feet high, with wide-spreading branches reaching from forty to sixty feet across. The nuts vary from oblong to round and range in weight from twenty-five to one hundred nuts to the pound. The shells are usually thin and can be much more easily cracked than the common shell-bark hickory-nuts.

The pecan is found growing wild in river bottoms up and down the Texas coast, in Louisiana, Mississippi, Alabama, Florida, Tennessee and several other Southern states. It prefers a rich, moist soil, though it is successfully grown in a variety of soils, some of which are very poor. Trees grown on the poorer soils seem to make less wood, but bear more nuts in comparison to trees growing on rich, black soils. The greater part of the gulf coast country is adapted to the growth of pecans, and they are now being grown on a commercial scale in a number of districts, although Texas and Louisiana are at present furnishing the bulk of the crop, which is derived mostly from native trees.

The pecan is easily propagated from seed, but they are liable to too much variation, seldom coming true to name or variety. Grafting and budding must be resorted to where it is desired to propagate the finer sorts. In growing trees from seed, the seed-bed should be well pulverized; first plow the ground well six to ten inches deep, then harrow down fine so as to produce as fine a seed-bed as possible. The nuts should be planted as soon as thoroughly ripe ones can be secured, three to six inches apart in the row, and covered three inches deep in heavy soils and four inches in light. As soon as the young plants are up they should be cultivated with a wheel hoe or a horse cultivator. Keep a dust mulch on top of soil to prevent drying out; in dry, hot weather water or irrigate the young trees occasionally.

A Pecan-Tree at Fairhope, Alabama. Trees Like This, Bearing Choice Nuts, Yield One Hundred and Fifty Dollars a Year

When eighteen months to two years old the trees are ready to bud or graft. Veneer, shield or annular budding have proven to be the most desirable methods for the propagation of the pecan. The scion should contain from one to three buds, which are generally procured in the spring when the trees are in a dormant condition. Later, when the stock has plenty of sap and is putting out its leaves, the soil should be cleared away from the crown roots and an oblique cut one and one half to two inches in length made from the crown up; a similar cut is also made on the scion and the bud is then inserted and held in place by wrapping with waxed cloth, raffia or heavy cotton twine, or the buds can be sealed with grafting-wax—six pounds of resin and one pound of beeswax melted in one pint of linseed-oil. Then heap up the soil over the stock and bud.

After six months or more the buds will have developed into strong, healthy trees and can be taken up and set out wherever they are to remain. Run off base lines and then measure off the distance apart the trees are to stand; seventeen to forty trees are planted to the acre, set twenty-seven to sixty feet apart; on very rich ground the wider distances are given. Have the holes dug wide and deep; use one half of the top, or surface, soil for filling in the hole. When ready to set out the trees, prune off all broken roots and cut the top off about midway. Always keep the roots moist and well wrapped in wet burlap or carry them in a barrel of water.

Set the trees in the center of the hole and be careful not to plant the tree deeper than it stood in the nursery. Use surface soil to pack in between the lateral roots and feeders. After planting pack the soil in firmly with the feet, then make a ring around each tree large enough to hold two bucketfuls of water. A good, heavy application of water will settle the soil around the roots, and every tree should live if they are not allowed to suffer for the want of water or cultivation.

The best time to set out pecan-trees is in November and on through the winter until the beginning of April. If the trees are to be procured from a nursery, the order should be placed early because the demand for pecan-trees is great and stock is liable to be sold out.

Good cultivation is absolutely essential and should be given at least once a month. Crops can be grown in the orchard for a number of years, such as corn, beans, peas, melons, cotton, potatoes, etc. A leguminous crop, such as cow-peas, velvet or soja beans, should be grown on the land once a year and allowed to rot and furnish humus. If alfalfa is sown in the orchard, it can be allowed to remain; a crop of hay can be cut every four to six weeks, and in the irrigated districts from four to nine cuttings can be had throughout the year, one half to one ton per cutting per acre. Alfalfa sells for sixteen to eighteen dollars per ton in this region —the Texas coast.

After the pecan-tree becomes well established some top pruning will be required. In general the training necessary for the pecan-tree is confined largely to forming the head. This should be started four or five feet from the ground. The strong center limbs should be cut back to induce growth of the lateral branches.

Pecan-trees bear a few nuts at an early age, but paying crops can not be expected under eight or ten years. A number of varieties of pecans have been originated which have proven to be a great improvement over the native sorts. In selecting pecans the points to be considered in estimating the commercial value are quality, flavor, plumpness of kernel, the ease with which the kernel separates, size and thickness of the shell. The thin-shell varieties are the most desirable, popular varieties being the Frotcher, large, with thin shell; the Stuart, very large, shell medium thickness, and the Van Deman, very large, shell medium thick, kernel sweet and delicious. Centennial, large, fairly thin shell, kernel plump and of good quality, is one of the oldest varieties. The above named are considered the best for commercial growing here in Texas.

The average yield at full bearing age is from ten to twenty bushels per tree, the nuts selling at one to five dollars per bushel. Select nuts are in great demand.

A. M. WHITE.

Orchardry for October

Use the larger limbs pruned from the orchard for wood, the smaller ones as a plug to stop that wash in the field or meadow.

Old raspberry-canes should be removed from the patch before the freeze-up and the new vines mulched with oat-straw or barn-yard litter.

Use a low, wide-tired wagon in the orchard, and thus avoid cutting up the sod and dragging the lower limbs over the bed, peeling and breaking them.

Autumn is the ideal season for horticulture, and as the farmer often has no time to prune, spray and mulch the trees in the spring, he is now due to get busy in the orchard.

Trim up the currant-bushes and give them a nice mulching with straw or barn-yard litter to protect the roots from severe freezing and to fertilize for a fine crop next season.

Prune the tops from the tall, slender fruit-trees. They form a high mark for the wind to blow down, are less vigorous than low-down trees, will not bear up as much fruit and make fruit-picking a harder job.

M. A. COVERDELL.

WESTERN CANADA'S 1910 CROPS

160 ACRE FARMS IN WESTERN CANADA FREE

Wheat Yield in Many Districts Will be from 25 to 35 Bushels Per Acre

Land sales and homestead entries increasing. No cessation in numbers going from United States. Wonderful opportunities remain for those who intend making Canada their home. Now districts being opened up for settlement. Many farmers will net, this year, $10 to $15 per acre from their wheat crop. All the advantages of old settled countries are there. Good schools, churches, splendid markets, excellent railway facilities. See the grain exhibits at the different State and some of the County fairs. Letters similar to the following are received every day, testifying to satisfactory conditions; other districts are as favorably spoken of:

Takes His Brother-in-Law's Word for It

Taylor's Falls, Minn., August 7, 1910.

I shall go to Camrose this fall with my cattle and household goods. I got a poor crop here this year, and my brother-in-law, Axel Nordstrom, in Camrose, wants me to come there. He formerly lived in Wilton, North Dakota. I am going to buy or take a homestead when I get there, but I do not want to travel two times there, for I take my brother-in-law's word about the country, and want to get your low rate.

Yours truly, PETER A. NELSON.

Wants to Return to Canada

Vesta, Minn., July 24, 1910.

I went to Canada nine years ago and took up a quarter section of railroad land and a homestead, but my boys have never taken up any land yet. I still hold the railroad land. I had to come back to the states on account of my health. Please let me know at once if I can get the cheap rates to Ponoka, Alberta.

Yours truly,

GEORGE PASKEWITZ.

They Sent for Their Son

Maidstone, Sask., Canada, August 5, 1910.

My parents came here from Cedar Falls, Iowa, four years ago and were so well pleased with this country they sent to Coeur d'Alene for me. I have taken up a homestead near them, and am perfectly satisfied to stop here.

LEONARD DOUGLAS.

Send for literature and ask the local Canadian Government Agents for Excursion Rates, best districts in which to locate, and when to go. Address

H. M. Williams
413 Gardner Bldg., Toledo, Ohio
J. C. Duncan, Room 30 Syracuse Savings Bank Building, Syracuse, N. Y.

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Without Cost

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You will be delighted to have so fine a fountain-pen. You will have use for it many times a day. It is the most convenient pen that any one could have. This one is guaranteed to write well.

Our Offer We will send you this wonderful fountain-pen by return mail if you will send us only four eight-month subscriptions to Farm and Fireside at 25 cents each. Tell your friends that this is a special bargain offer. You can easily get them in a few minutes. Send the subscriptions to

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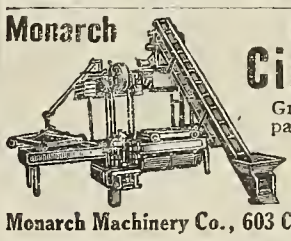
Folding Sawing Mach. Co., 158 E. Harrison St., Chicago, Ill.

Monarch Hydraulic Cider Press



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Hercules Stump Puller

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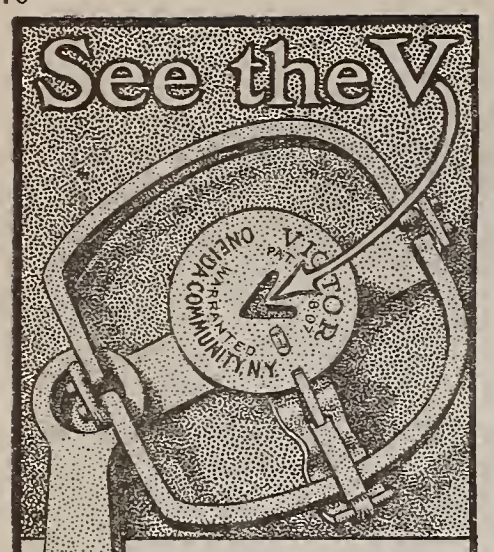

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ABSORBINE
will clean them off without laying the horse up. No blister, no hair gone. $2.00 per bottle, delivered. Book 8 D free. ABSORBINE, Jr., for mankind, $1 00. Removes painful Swellings, Enlarged Glands, Goitre, Wens, Bruises, Varicose Veins, Varicosities, Old Sores. Allays Pain. Book free.
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Save time, horses, work and money by using an
Electric Handy Wagon
Low wheels, broad tires. No living man can build a better. Book on "Wheel Sense" free.
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in any kind or condition of grain. Simple in construction and easy to operate. Write for catalog. All styles. Sweep, Geared and Power Mills, Horse Powers and Wood Saws.
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We manufacture Lawn and Farm FENCE. Sell direct shipping to users only, at manufacturers' prices. No agents. Our catalog is Free. Write for it to-day.
UP-TO-DATE MFG. CO., 971 10th St., Terre Haute, Ind.

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Made of High Carbon Double Strength Coiled Wire. Heavily Galvanized to prevent rust. Have no agents. Sell at factory prices on 30 days' free trial. We pay all freight. 37 heights of farm and poultry fence. Catalog Free.
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Farm Notes

Down With the Dumper!

Woe be unto thee, thou misguided dumper!

Thou are a detriment unto the whole farming world.

Even while thy golden grain is pouring from the separator, thou planneth and promiseth to deliver it into the pit of the elevator or haul it to the car on track.

Soon after threshing-time, thou and many of thy neighbors thus dump thy grain crop upon the market; the grain-dealers snap it up at a low figure and soon they have possession of almost the entire crop. Then the price soareth upward!—and who is benefited by this rise?

Sometimes thou mayst have a debt to settle and thinketh it is meet that thou shouldst sell thy grain to pay that debt. Consider, for a moment, how easy it will be to get a friend or a loan agent to advance the money on thy crop. Be thou willing to pay interest on thy loan and rest assured that the rise in price usually will still leave thee a handsome margin above what interest thou hast to pay for the use of the money till thou sellest.

Mayhap thou lackest confidence in the market and feareth a decline in price. Oh, thou of little faith and scant observation! Dost thou not remember that, as surely as the run riseth above the eastern horizon, the price of grain almost invariably goeth steadily upward as soon as threshing-time is over? Wilt thou contribute thy mite toward the establishment of these conditions or wilt thou assist in swelling the minority and thus realize a more substantial profit from the sale of thy grain? It is simply a matter of thine own choice.

There may be times when the settlement of some pressing debt makes it impossible to arrange for its payment without selling thy grain, but if thou make immediate sale of it simply because thou hast failed to prepare a bin or because thou wouldst get rid of caring for it, thou art of all fools the biggest and laziest. Go thou and build a substantial bin, making it rain and rat proof. By this plan there will be little shrinkage and no waste, and if the price goeth not up to suit thee, secure some likely live stock, feed out thy grain and return the fertility to the soil. Surely, thou canst perceive that either of these courses will bring a far greater reward for thy toils than dumping thy grain on an early market. M. Coverdell.

Rabbit Wisdom

In answer to a request through your columns for the reason why small Belgian hares die and the cure, I drop this bit of wisdom: It is rabbit wisdom only. The ailment is dysentery and is caused by a ration of damp and wet grass. The only remedy is prevention. Gather the grass for the morning's feed the evening before, early enough to get it dry, and place it in a dry place until morning. Before I would let them have wet grass I would feed dry hay, and give water in a clean cup near by.

Remember this, act upon it and see that children are not allowed to keep feeding the poor bunnies in season and out of season, and the hares will not have dysentery. After I learned this secret at the feet of old Mother Nature I had healthy bunnies and raised one hundred and ten in six months, from three does. They must have dry runs, a warm place to rest and hide, and regular food. Excessive hunger and followed by a gorge of wet grass will give the little chaps this ailment and colic to the mother.

Right here reason proclaims an edict—to wit: A mother with the colic should not nurse her young lest she give to them dysentery. A. C. Carle.

Safe "Ricking"

Thousands of farmers have no storage room for the corn-fodder, and leaving it exposed, must lose much of it, as each stack or rick is more or less damaged by storms after it is opened to be fed.

To these I think I can give some really valuable information and advice on how to build ricks that can be opened with no serious damage, no matter how long they may be left open.

The drawing will make it plain. It is very simple, but effective. Begin by setting up a shock of bundles at that end of the rick that you intend to let stand longest, taking care to pack closely and very firmly.

Continue thus until you have a shock (A) the size you wish your rick to be—twelve feet by thirty feet is a good size—having an equal number leaning to the center from each side and giving the outside bundles just enough slant to make them firm.

Now, climb on top and begin at first end, placing a bundle immediately at and parallel to the end, with the ends of the bundle about the same distance from either side of the rick. Place the next bundle close against the side of the last one, turning the top of the bundle to the other side, and continue thus, placing bundles with tops alternately to one side and the other, until you reach the other end of the rick, giving you a layer of bundles (1) down the middle of the rick.

Go back to the beginning and lay the next tier (2) with tops meeting or crossing in the center and butts projecting over the sides—like the eaves of a house-roof.

Then, again, lay an alternating tier down the middle (3), and then another layer with tops meeting in the center and butts over the sides (4).

Continue thus, with alternating middle tiers and tiers with tops at center and butts out, until about four layers from the desired height—having a middle layer (as 5) last.

Place another tier (6) with tops crossing, but draw them in so the butts rest about half-way from the butts to band on

Rick From the End—Showing Bundles as They Would Lie if Not Pressed Down

the last outer layers. Now lay another central layer (7). Draw the next outer layer (8) about the same distance in on the last outer tier (6). Now form your apex by placing another outer layer (9), drawing in about the same distance, and packing tops firmly together in the center.

Some prefer building by layers (alternating outer and middle layers) from the ground, without making a base of bundles set on end. Either plan is all right, but, in either, always go back and begin each new layer from the same end, so that all begin at end A, and all finish at end B.

When you take away a part of the rick, take a slice, one or more bundles in thickness, from the apex to ground—just like talking a slice from top to bottom from the gable-end of a house. Naturally, the last bundles placed, when building, are the first removed when tearing down.

E. A. Wendt.

The Magic of New Paint

Does it pay to paint? Let us see. A man I know purchased a farm for thirty-five hundred dollars. The buildings had one time been painted, but were almost bare at the time of purchase. In fact, the place had a "run-down" appearance, although the land was good and the buildings were well built and commodious. The purchaser immediately treated the buildings to a couple of coats of paint, costing in the neighborhood of a hundred dollars. In a few weeks he sold the place for four thousand dollars, and the man who purchased it thought it a bargain, everything about looked so new and fresh. Paint did it. Of course, it paid the man to paint.

Again, side by side live two farmers. One seems to have a love for the paint-keg, the other acts as if he did not know what paint was made for. The buildings of the one are neat and fresh and well preserved while the buildings of the other look as if they were rotting down. He will actually be compelled to replace the decayed lumber with new very shortly. Paint could have saved him his outlay of time, work and most of the money.

For barns, sheds and farming implements a good and inexpensive paint can be made of linseed-oil and venetian red. Two to five pounds of venetian red will make a gallon of paint, which may be kept in a can or jug ready for use at any time. W. D. Neale.

What Wonder Indeed

The naked hills lie wanton to the breeze;
The fields are nude, the groves unfrocked;
Bare are the shivering limbs of shameless trees;—
What wonder is it that the corn is shocked!—*From an Old Almanac.*

Helps to Straight Rows

Did you ever see a farmer, when striking out a land, journey to a rail fence or pile of boards for stakes and stick them up by guess as a guide for the first furrow? Then, just as the furrow was started, did you ever see the furthermost stake fall down out of sight?

It pays to have a good set of four stakes on hand, four or five feet long and well sharpened. Three are enough, but the extra one serves to replace broken or mislaid ones.

Mark on the stake, measuring from the sharpened end, the distance your rows are to be apart, ordinarily. A strip of paint makes the best mark, but a long notch will do. If your first mark is three feet from the point, make the next six inches nearer the top, and you are ready for any ordinary rows you will have to deal with.

If the top for about a foot or more is painted white, it will facilitate seeing stakes sixty or eighty rods away.

Possibly there may be no direct gain from taking such pains about marking out lands, but what do you think when you pass a field of rows that all have curvature of the spine? R. E. Rogers.

What We Have Garnered

[continued from page 5].

but increased sowings in Canada and Russia increased this by millions. The early season was favorable. Trouble came in July and reached far and wide. The drought which the United States felt so severely extended up into Canada, and similar conditions prevailed in Russia. In France an unprecedentedly wet and cool summer did irreparable damage and brought serious losses. Threshings are pretty generally causing downward revision of pre-harvest estimates, and even where anticipated quantity is materializing complaints are numerous of deficient quality. The excellent early prospects in Germany and Austria-Hungary have not been fully maintained, and the Russian crop, though much in doubt as to the actual quantity, is known to have suffered seriously in quality in many locations from torrential rains during harvest.

Argentina has had an unusually good year and excellent crops of wheat, flaxseed and oats are expected. In some of the northern districts drought and frequent frosts did damage, but a high average will certainly be maintained.

In England the grain and root crops are fairly satisfactory. The hop crop has seriously suffered from blight.

Italy is expected to have a wheat crop of 185,000,000 bushels as against 194,000,000 in 1909. The harvest in Holland is reported good. Denmark has had a good year. Rye, the chief bread grain, is estimated to have yielded about 18,600,000 bushels, an increase over last year. Wheat has turned out well.

Practically all of Germany's crops are disappointing. Cool, wet weather, with occasional hail between the middle of July and the middle of August caused damage. Cereal yields in Austria are disappointing. Excessive rains did much harm, and there have been ravages by insects and field-mice. Potatoes have suffered greatly and corn is backward. The early optimistic reports from Bulgaria, Roumania and Servia are not substantiated, although the wheat crop is expected to be the largest, except one, in the history of the country. Hungary's cereal crops are fairly abundant. Russia's wheat covers 71,000,000 acres; rye a surface slightly less. While great deterioration has taken place lately, there should be a crop of 682,000,000.

Walter J. Fahy.

Headwork Winners August 25

J. Wesley Griffin - - "Bit-Holder"
Ralph W. Brown - - "Kicking Poke"
R. W. Robertson "Shows Where Seeds Go"

Live Stock and Dairy

Automatic Gleaners in Dakota

WHERE is the farm in the Mississippi Valley (for I am familiar only with the Mississippi Valley) that has not some weeds on it, on which some grain does not go to waste in the harvest-field, where some corn is not left in the fields in the fall? I think there is not one.

What is left in the fields in the form of weeds or grain or even corn-stalks or straw is largely wasted—a waste to be guarded against if possible. And when we guard against this, we guard our greatest asset—soil fertility.

Farmers in the East who are buying back the soil fertility their forefathers sold know what it is to make ends meet while farming on impoverished soil. We of the West know but little of this yet; but we should never forget that if we take the proper care of our soil so as to bequeath to our sons and daughters a soil as rich as it was in its virgin state, we shall have done our duty only by refraining from the robbery of the next generation.

And where is the farmer who does not enjoy building his soil and watching his land produce better and better crops each year? Who does not like to see his corn ranker and greener than it has ever been before or to thresh a heavier crop? That man does not live.

What is it the soil most needs to accomplish this? First, humus. And what is our greatest source of humus? Manure from the barn-yard. Nothing will quite take its place. Clover may be plowed under, but it does not do as much good as manure. Some soils also need more phosphorus than manure can give and some need lime, but we of the West have not yet started buying either. We must learn to build up soil without this cash outlay. How are we to do it? It is simple when we so manage that all grain, grass and weeds must be returned, or the soil will have lost fertility. Not much perhaps, but some, unless it is all returned. The nearest we can come to this is through live stock, and of all live stock, the greatest savers of waste are sheep. They will eat weeds that nothing else will touch.

Wherever sheep and lambs have been grown and fatted in a husbandman-like manner, the pastures are rich and green, and the grass under your feet is thick and luxuriant. The proprietor who walks over such a pasture has a feeling of wealth and security that nothing else can give, for he knows that in dry and adverse years his pasture will still be good, for the soil is well fed and rich. The fields on such a farm are free from weeds, for the sheep is the best weeder. And what are the meadows like? They, too, give one that feeling of life-long security, for the standing hay is tall and luxuriant and as thick as it can stand. This is the condition of the farm on which a good flock of sheep is kept to glean the fields year after year.

Wool is a By-Product

It makes no vital difference to this farmer, if he is a thinking man, whether wool prices are high or low. He is growing those sheep to preserve for his farm—for himself and the next generation—a soil as rich as it was when he took it, and in so doing he is getting a comfortable living. If there were no wool market, he would still grow the sheep and make a profit from the mutton standpoint. We don't shear our cattle nor our hogs and yet they make us a profit. The sheep make better gains for feed consumed than either and give us a fleece besides. So I repeat, wool prices do not much matter. The thinking farmer will have all the sheep his farm will carry unless he is strictly a dairyman; and even then he will have a small band of good ewes as gleaners.

How about the men who have no sheep? To such I say, get ready for the sheep as soon as possible and then get the sheep. It looks like a good time now to buy breeding ewes. Prices are lower than a year or two ago, and yet there is a shortage of breeding stock throughout America, which means higher prices for future lambs and fat sheep. And how do you get your farm ready for these gleaners? By fencing with woven wire. Never fear! The sheep will glean enough in wasted grain and weeds to pay for the fence, and you will have the satisfaction of a well-fenced farm and clean fields and green, luxuriant pastures almost before you realize it.

I know whereof I speak, for I am not writing this at a desk in some city. I am a farmer out on a hillside in Dakota, writing this on a tablet held on my knees while I watch a band of nearly a thousand sheep glean the weeds out of a pasture where sheep have never been. They actually prefer the goldenrod, the sunflower and the rosin weed to grass which has not had a hoof on it all summer. We are fencing this with a high woven wire fence. It has had only a cattle fence, for cows and calves. There is a fine ash grove in it and a little living spring. But the cows and calves never made use of the weeds, so we decided to put in sheep to turn the weeds as well as the grass into money. It is a hilly, stony pasture, but the sheep will do well on it, while the cattle flourish better on the bottom pasture, where the sheep have been. That is now as green a pasture as a man ever walked over and you all know this has been a dry year.

The sheep are all in one flock now, but soon we shall make three flocks. One of breeding ewes for another year; one of wethers and cull ewes to be fatted this fall; one of lambs also to be fatted this fall or winter.

We bought another quarter section of land this year, the pastures and fields of which were overrun with weeds. Since harvest we have herded the sheep in the stubble. They have cleared the weeds out long ago, and eaten the heads of grain which escaped the binder. We will fence that farm now and sell those weeds in mutton and wool and get a good rich legacy of fertility besides.

Before the last cultivation of corn on this quarter, we sowed rape, as when frost kills the corn leaves we will turn in the wethers and cull ewes to eat the rape and weeds (for the field is weedy), and to husk their own corn and grow fat. They will have ample pasture with their corn and rape, and will fatten at a small expense and leave the field richer and in better shape.

The lambs will go in another field of corn and rape, and run on clover pasture; for they must grow as well as get fat, and nothing furnishes the protein for their growth quite like clover. They will get fat, too, and go to Chicago this winter. The breeding ewes will go down on the bottom in the stubble where rape was sown with the grain. They will get fat enough on that and a blue-grass pasture to be in good condition for the winter, especially if turned into the corn-fields after husking to get the few nubbins left by the huskers.

This winter we will have silage to feed our breeding ewes. It will be an experiment as far as we are concerned, but a success, I think. We will feed bran, clover-hay and corn-fodder along with the silage, scattering their fodder out on the pasture some distance from the barns. This will insure exercise.

Now some one will say, where does that fellow get the yearling wethers he is talking about? We buy them in the summer at Omaha. We bought this year the first of August. We can't afford to grow our lambs to wethers. We want a breeding flock, but we can't keep one large enough to grow all the lambs we have feed for, so we buy wethers. They are easier fatted, better gleaners and hardier than lambs. That is why we prefer them. Perhaps when all our farm is as rich as portions of it are now we may raise enough lambs, but that time has not come.

For the man who has a weedy farm to clean up wethers are the best proposition, as I see it. To the man who thoroughly understands handling ewes and lambs there is often big money in buying cheap old ewes at this season, running them over one season, lambing them from good mutton-typed rams, and selling both ewes and lambs fat within the year; but the beginner had better buy strong young ewes that have had one or two lambs and know better how to care for them. Such ewes can be got reasonably cheap this fall at any of the markets, and the men who buy them and properly care for them and their lambs will never regret having done so. The weeds will disappear the first season, the grass will soon be growing thicker where the ewes are pastured and the waste of the grain-fields will be cut to a minimum. PAUL H. BROWN.

They Turn Stubble and Weeds into Cash

Bad Troubles With Calves

A SUBSCRIBER living in Hancock County, Ohio, asks advice about his calves, which have "scours," or "calf cholera," when about three weeks old. They run in a clean, well-sodded orchard and have a clean shed, are well bedded. His description shows good feeding and painstaking care, but nevertheless the calves get sick and, after lying around for ten or twenty days, they have spasms, gritting their teeth, running wildly and blindly into fences and around and around in circles, and finally die in great apparent agony. He has consulted veterinarians with no relief.

The complaint is a very serious one and very difficult to overcome. Furthermore, as you have found, it is very hard to diagnose. It may be either anthrax, hemorrhagic septicaemia or navel ill. It is an infection caused by one of two or three different specific germs which gain access to the blood of the calves through some wound or broken skin surface. The germ is present some place in the barns or lots. First thoroughly clean and disinfect all calf-pens, barns and sheds inhabited by the calves. Keep the calves out of mud or wet stalls. These considerations are incidental to the main preventions, but must be given very careful attention. It will be found a hard fight and every precaution must be taken in a thorough manner.

The main operation in preventing the disease is to watch closely for the birth of all calves. Have a strong string soaked in a solution of creolin or lysol and just as soon as a youngster is born thoroughly bathe and disinfect the umbilical cord and tie the string tightly around the cord close to the body. This is the usual source of infection.

Without these precautions the disease will probably never be eliminated, but where all of them are carefully observed, and especially the latter, the trouble will soon die out. The infection is not caused by the feed. The writer has always found that to prevent scours in young calves an excellent plan is to feed a teaspoonful of blood-flour, which can be purchased direct from the packers, in each feed of milk given to each calf.

HUGH G. VAN PELT.

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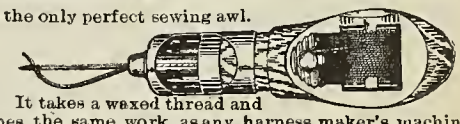

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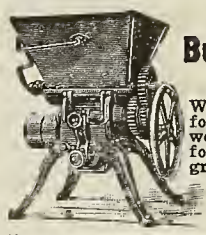

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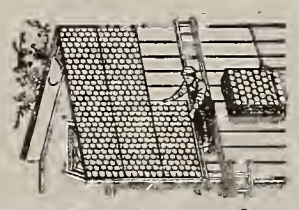

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Live Stock and Dairy

Lambs for Fall and Winter Markets

THE following extract from the stock-yards report of the *Chicago Tribune* of August 24th emphasizes the importance of feeding high-class lambs only: "A feature of the trade was the severe discrimination shown by buyers against native lambs of inferior quality. Such offerings were almost unsalable, while the fancy fat lots cleared freely at $6.50 @ $6.80."

We have already discussed the preparation of lambs for the spring markets. Those for fall and winter will form the subject for present consideration.

Following up the idea of starting with a flock of one hundred breeding ewes, fifty of which, with a Dorset ram, are already in use, fifty more have now to be obtained, and since they must be bred early in October, they should be on the farm by August. The date of their purchase will have, to some extent, to depend on the condition of the pastures and on the provision of green foods and roots that has been made for them in case a dry summer has burnt up the grass. If this provision is ample, a few weeks will serve to bring them into proper condition, even if rather low in flesh when bought. If there is a short supply of forage, either more will have to be paid for better-conditioned ewes or larger grain rations will have to be given: though nothing is so desirable for them at this period as folding them on a crop of early white turnips or rape or soiling them on the pastures with rape or rye mown and carried to them. With this a grain ration of half a pound a day, which should by September be increased to a pound, one half being of oats, one fourth of bran and one fourth of linseed-meal. If no oats are available, wheat may be used—both are best crushed. Corn is too fattening for breeding ewes. If both oats and wheat are on hand, equal parts of both grains form a very palatable mixture.

The Dorset ram having by October had a good rest and being now four years old, should be quite sufficient for these fifty ewes; but in order to maintain the purity of the flock, and because it is not well to "put all your eggs into one basket," a two-year-old pure-bred Shropshire ram should be bought and these ewes bred to him in October, the Dorset being kept for the spring lambs.

In England the great breeders had a custom of letting their rams for the season, they taking all risks providing, of course, that due care has been taken. They will change the ram should the one already supplied not prove satisfactory or meet accident. I once hired a heavy Lincoln in this way. Being very eager, he fell and dislocated his shoulder on the second morning of his service. He was replaced by an equally good one, as a matter of course, at no cost to me.

Lambing is likely to commence toward the close of February and should be over in twenty days or less. The lambs for Easter should be strong and easy to handle by that time and will require but little of the shepherd's care beyond punctual feeding and clean bedding. One division of the yard, with some of the small pens, with sufficient shelter should be allowed for them and their dams, and so ample space will be left for this new lambing.

Until the pastures are ready this new lot of ewes and lambs will remain in the yards and be treated the same as the earlier lot, except that their grain ration will be less. A pound a day, with as much roots or early rape or rye, with a few pounds of good, bright hay, should suffice for a one-hundred-and-fifty to one-hundred-and-seventy-five-pound ewe with her lamb, which will soon begin to share in it.

Supplement the Ewe's Milk

It must never be forgotten that the advancement of the lambs depends largely on the liberality, united with care and judgment, with which the ewes are fed up to weaning-time. These lambs are expected to average from one hundred and twenty to one hundred and thirty pounds when nine months old; so they must be accustomed to take their share of the grain and other feed from almost their birth. As soon as they seem to enjoy this they should be fed apart from the ewes, though, of course, their main reliance will be on their dam's milk until weaned. At first one eighth of a pound a day in two feeds, morning and night, gradually increasing it up to half a pound when three months old. By making a creep-hole into a separate part of the yard and feeding them there with absolute punctuality, they will quickly learn promptly to go to it. Be sure the ration is served in clean troughs. By this time they will probably be helping themselves to a full share of the hay and the succulents served to the ewes; if not, give them a liberal amount separately, not forgetting the clean water and the salt.

At about ten days old these lambs should have been docked, and the males castrated. For all these minor operations, which the shepherd should perform, I know of no better guide than Doctor Randall's book, "The Practical Shepherd," in which he gives minute directions impossible to be gone into here. Any bookseller will get you the book. Or you can learn the method from the nearest good shepherd.

As soon as the pastures show a fair growth both ewes and lambs should be turned into them, their grain ration being continued, but in less quantity. At four months old the lambs should be weaned, and the ewes removed to a distant pasture out of hearing and their grain discontinued, and to facilitate their drying out it will be better to give them a run on stubbles for a time. As they will be bred again in October they should early in August, if dried, be changed to a good pasture which has been laid by for them or onto rape or any other green crop as described further on, and a moderate grain allowance resumed. If only poor pasture is to be had, on account of droughts, they should be soiled on it with rape or rye or some similar crop or with turnips if there are any early ones, and their grain allowance increased to a more liberal one in preparation for breeding.

At weaning, any lambs which have been reserved as rams must be separated from the others; but, since we are concerned more with feeding than with establishing a flock, none of these should be retained, except perhaps one or two promising ones.

After weaning care must be taken that the lambs are kept advancing. They should be put on pasture with a daily ration of mixed grains such as oats and wheat or oats and corn with bran and linseed-meal in the proportion of one half of grain, one fourth of bran and one fourth of linseed-meal. One fourth of a pound of this in two meals, morning and night, is enough at first, being gradually increased to half a pound. A run of an hour or two on rape, rye or clover is good. If they have had their morning ration before this run, there is not much danger of bloating, but they should be carefully watched at first. In lieu of this, the following plan may be adopted:

Perhaps the most healthy and economical method of preparing lambs for fattening is that of folding them on green crops, the best of these being rape, rye, clover and vetches; always helped out by a ration of grain. The importance of providing these crops can not be over-stated. All of them by being sown early in the fall will be ready by May or early in June. I hope to be able in a future paper

[CONCLUDED ON PAGE 13]

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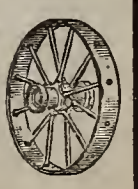

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Looks and Feeling of Cattle

ACCURATE appreciation of the qualities of stock is a most useful asset. Few men are all-around sure judges of cattle. The great variety of breeds, the methods of feeding, the varied character of the districts in which cattle are kept, all have influence in affecting their "points" and appearance so that it requires long and varied experience to make a thorough judge of cattle. Of course, the qualities or points of cattle must vary according to their purpose. A dairy animal will have points that would be altogether improper for the beef. I have often been asked to tell a healthy beast from the opposite. The healthy animal, irrespective of his points and quality, may be known by general activity. There is a look of fullness in all parts; the head is carried high; no arching of the back; no thinness of the thighs; the eye is full and bright, and when at rest the breathing is regular and quiet, without heaving at the flanks or coughing; the hair is regular, according to the season of the year—in winter it is fairly long and not silky, and lying not too close to the skin; in spring it is coarse, and different parts of the body are being licked by the animal, because of the irritation of casting the coat; in summer the hair is finer, not short, and lying as a horse's coat would appear, but not quite so close to the skin. It should be a fine hair, not quite curled, but what may be described as having an appearance of fine moss.

When handled the skin should be in a condition most difficult to describe in writing. This, called the "touch," is one of the best indications of health and thriving quality. On gently pressing the back from shoulder to tail with the tips of the fingers there is felt a softness that is best described as a sensation that the fingers press upon a thick skin that is covering an under layer of thick oil. Along the ribs the same process is gone through, after which the skin on the ribs is caught by the thumb and fingers, and if it yields to a gentle lifting from the ribs and preserves its thickness and softness, we may rest satisfied. Experience in gaging this quality will alone bring knowledge, and the young farmer will do well to practise on every available opportunity to trace the quality in animals that are noted for good thriving quality or its reverse.

Points that indicate promise of growth and the opposite? This question has reference to young cattle, and it is probably intended to apply to stock cattle or feeders. "Large for its age" is a description that most people understand. The young animal should have good length with large joints without coarseness. The head should be carried well above the level of the body; it should be wide between the eyes and generally full at the eyeballs. Head short and fairly fine at muzzle; horns short, thick, not turned up at points and waxy looking. Back level. Hips not too wide. Barrel round, with full body and not tucked up at under line. Tail not set too high, as this quality would indicate bad feeding quality and coarseness of rump, a point in the beef. Looked at from the side, imagine two straight lines, one drawn along the back from point of shoulder to tail, another line from breast underneath belly to a point above the hock; two other lines from point of shoulder to breast and another from point of setting on of tail to hock. These lines being parallel should in a perfect animal include as much of the animal as possible. Looked at from behind a similar set of lines should include within them as much of the back, sides and buttocks as are viewed from behind. All this really means that within the parallelograms one sees as much of the body included as possible, which indicates that as a result of feeding we shall have the largest amount of meat possible within a medium compass. Narrow, arched back; large bones; large belly; narrow breast; long, narrow face; cocked horns; hard thin skin; wire hair; hind legs crossing in walking—all indicate want of thrift in an animal intended for feeding.

It must be remembered that the points here noted are applicable mainly to feeders. The points in dairy cattle are widely different, as the animal machinery is placed differently for these purposes.

W. R. GILBERT.

"These lines . . . should include as much of the animal as possible"
This young bull is Selection, Grand Champion Shorthorn Bull at 1909 International

Lambs for Fall and Winter

[CONTINUED FROM PAGE 12]

to discuss the best methods of providing these crops. At present we will merely consider the method of folding.

It is poor economy to turn sheep loose into a green crop; they tread down and spoil too much of it. To avoid this, the hurdles can be brought from the yards, being no longer needed there, and a pen of about half an acre (one hundred and ten by twenty-two yards) formed. Or woven wire fence can be used, as was described (for pig pasturing) in FARM AND FIRESIDE of May 10th. If enough fencing can be provided, it would be better to inclose an acre, which with a fairly good crop should keep sixty lambs well employed for ten days. When they have eaten down this pen, the next acre should be inclosed, and this one left to grow again. A six-acre field of any of the crops above mentioned will thus—assisted by their regular grain ration—keep this number of lambs improving nicely for sixty days, by which time the acres first eaten will be ready to entertain them again; or the ewes can be turned into this second growth if the pastures are much exhausted.

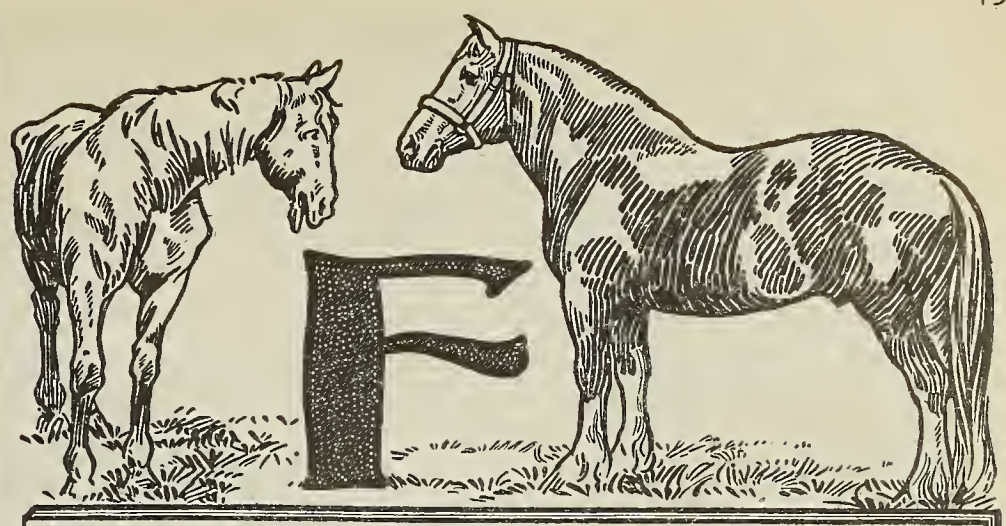
To keep up the supply of these green crops so as to provide hay or silage, a few acres of each of them should have been sown in succession in the spring (the proper varieties suited to spring sowing being used) and the lambs folded on part, the balance being mown for the above-mentioned purpose.

Since the lambs should be ready to market by the close of November, they should be yarded early in October and be fed all that they will clean up with relish. A pound a day of their grain ration will not be too much, and a good variety of the green forage, together with some good bright clover or meadow hay, should be fed to them, care being taken to remove all left-over food, to keep the troughs scrupulously clean and to see them properly supplied with fresh water and salt, and freely littered with fresh straw. They will get what exercise they need in the yards, but for the last two weeks before marketing it will be well to confine any of them that seem below the average of ripeness in pens of three or four.

I do not advise shearing these lambs before selling—it injures their appearance and there is risk from cold.

I had intended to say a few words about marketing, but the ground is fully covered in the last paragraph of Mr. W. Milton Kelly's article on "Feeding Range Lambs," in FARM AND FIRESIDE of August 25th.

JNO. PICKERING ROSS.



It Costs Less
To Keep A Horse In Good Condition
Than To Keep Him In A Poor One.

An animal secures no benefit from food unless it is digested. Undigested foods poison the blood, lessen working ability and produce disease.

The horse on the left eats *more* than the horse on the right, but he doesn't digest his food properly—doesn't secure the nourishment it contains.

The horse on the right digests his food thoroughly. All the nourishment it contains is turned into rich, red blood, solid muscle and working energy.

Fairfield's Blood Tonic
For Horses Only

purifies the blood, prevents and cures disease, exterminates worms, increases working ability and cuts down feed bills by perfecting the digestion. Used regularly, it adds years to the life of your horse and greatly increases his value.

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Each Kind Of Animal

because the roots, herbs, etc. so beneficial to one kind of animal are of so little benefit to any other kind.

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Blood Tonic And Regulator For Horses Only.
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Ask your dealer for them.

FREE—"Fairfield's Stock Book". Worth $1.00 but sent *free* for name of your dealer and this paper.

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500 South Delaware Ave.,
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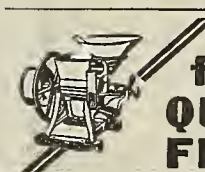
Fairfield's Lice Killer is a farm and household necessity.



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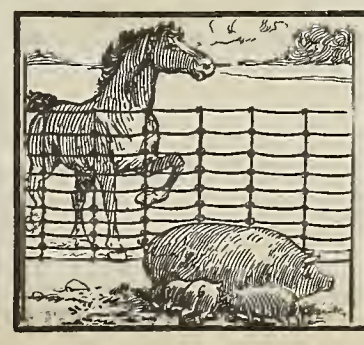
SETS OF SIX

Six attractive Post Cards appropriate to the Hallowe'en season—handsomely lithographed and richly embossed on gold back-grounds. Just the cards for the occasion.

ALL FOR SIX CENTS

Send us only six cents in stamps and we will send you, prepaid, a complete set of these fine Hallowe'en Post Cards. Address

FARM AND FIRESIDE
SPRINGFIELD, OHIO



"The Knot That Cannot Slip"

This knot is different from all other ties, clamps, weaves or welds on the market. Cannot slip to mar the galvanizing; does not cause the wire to break just beyond the joints; has no protruding ends to snag animals. These are some features that make

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the best fence for the money—strong, durable and always neat looking. Easy to put up and lasts a lifetime. Made of hard-drawn, spring-steel wire heavily galvanized. Absolutely impervious to weather conditions. Our unlimited guarantee is your protection.

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Dealers and farmer agents wanted where we are not represented. Write quick for desirable territory.

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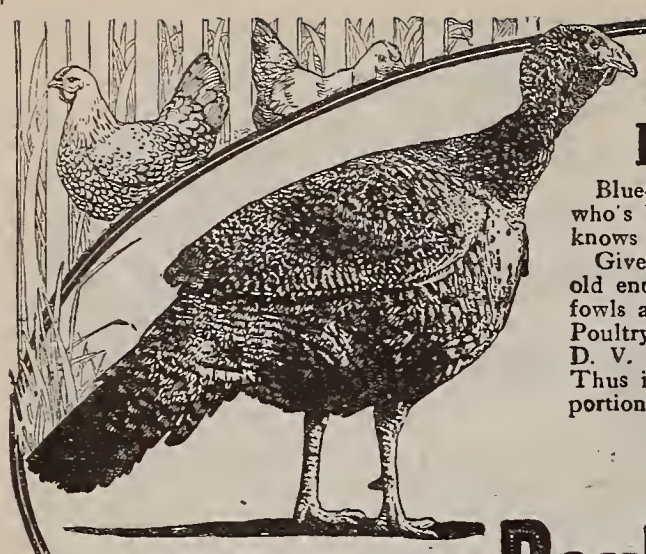

Good Birds Bring Top Prices

Blue-fleshed, wrinkle-skinned fowls sell slowly. The man who's been up against a dull market with a poor "offering" knows *that*. How, then, shall we *always* have "prime" fowls?

Give Dr. Hess Poultry Pan-a-ce-a to the chicks as soon as they're old enough to eat (a trifle mixed in soft feed) and continue until the fowls are fit to kill. Here's the philosophy of the matter! Dr. Hess Poultry Pan-a-ce-a is a *tonic*. It is formulated by Dr. Hess (M. D., D. V. S.) from elements which act beneficially on the digestive organs. Thus it helps the tiny chick and the growing fowl to *use* a greater proportion of the food they eat and lay it on as flesh. For the same reason

DR. HESS Poultry PAN-A-CE-A

A penny's worth feeds 30 fowls one day. Sold on a written guarantee.

makes hens lay more and better eggs. Less meat-scrap, milk, wheat and corn goes to *waste*, when Dr. Hess Poultry Pan-a-ce-a is a regular part of each day's rations. "A poor ration, well digested, is better than the best ration poorly digested." This is the "Dr. Hess Idea" of feeding and that it pays, thousands of happy poultrymen can testify. Poultry Pan-a-ce-a cures roup, cholera, gapes, etc.

1½ lbs. 25c, mail or express 40c; 5 lbs. 60c; 12 lbs. $1.25; 25 lb. pail $2.50.
Except in Canada and extreme West and South.

DR. HESS & CLARK, Ashland, Ohio

Send 2c for Dr. Hess 48-page Poultry Book, free

DR HESS STOCK FOOD gives the stockman and farmer a chance to increase profits without increasing outlay for hay or grain. It makes better *digestion* in farm animals and thus increases the amount devoted to milk and flesh and *lessens* the amount wasted by non-assimilation. This is "The Dr. Hess Idea" of farm feeding. It has added fortunes to the profits in the cattle industry. Dr. Hess Stock Food relieves minor stock ailments.

100 lbs. $5.00. 25 lb. pail $1.60. Except in Canada and extreme West and South.
Smaller quantities at a slight advance.

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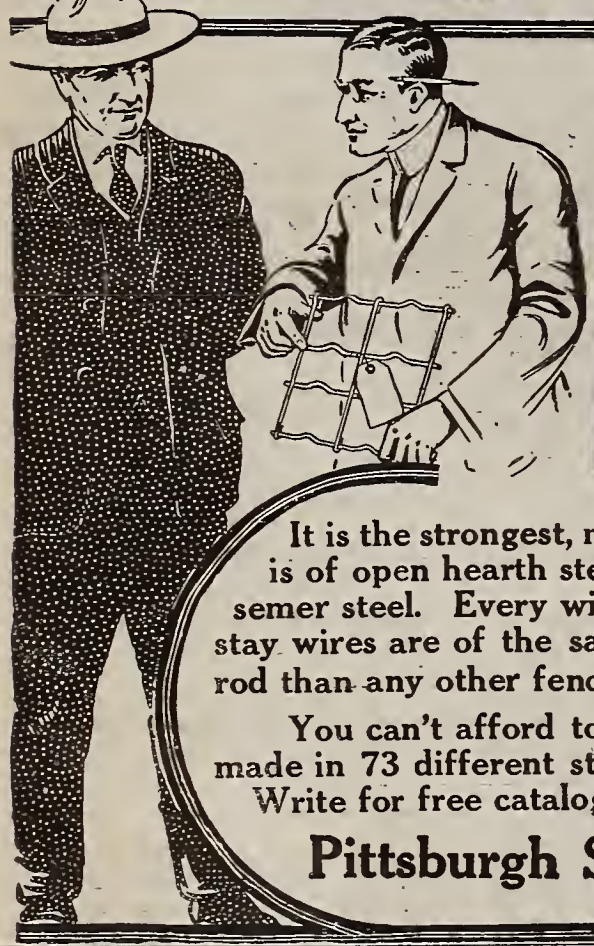
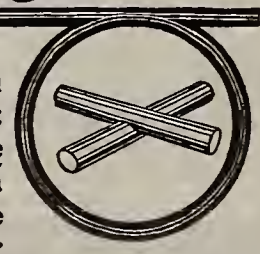
INSTANT LOUSE KILLER KILLS LICE

Your Dealer will show you



Go to your dealer—ask him to show you the only welded fence made—compare it with any other fence—note the waste wire in other fences—the wire used in clamps, ties or twists—then test the strength of the weld; it is even stronger than the wire. See the fence—use your own judgment. The



"Pittsburgh Perfect" Fence
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It is the strongest, neatest, most economical fence ever made. Every wire is of open hearth steel—stronger, tougher, better in every way, than Bessemer steel. Every wire is welded by our own improved process. Line and stay wires are of the same gauge (size;) and the "PERFECT" costs less per rod than any other fence made of the same gauge wires.

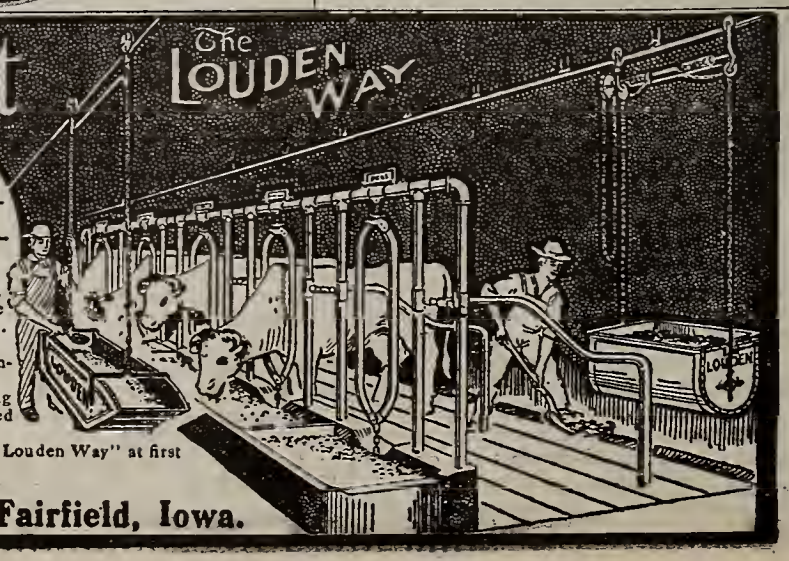
You can't afford to miss seeing the "PERFECT" Welded Fence. It is made in 73 different styles for every fence purpose. Your dealer sells it. Write for free catalog.

Pittsburgh Steel Co., Pittsburgh, Pa.

A SET OF SPOONS GIVEN AWAY

For Particulars Write **FARM AND FIRESIDE** Springfield, Ohio

Louden Galvanized Steel Barn Equipment



Louden Sanitary Barn Equipment finished by the **Louden Special Galvanizing process** is the acme of dairying sanitation. A milky white surface of pure zinc—impervious to all corrosive elements—won't flake or chip off. Smooth, clean, bright and cheerful. This is our own process—far superior to ordinary galvanizing—done in our own factory under the supervision of the men who are responsible for **Louden Quality**, being standard of the world.

Louden Sanitary Stalls—made of tubular steel with malleable fittings—economical of floor space—sufficiently roomy—allow free circulation of air and light—protect cows from injury—afford perfect sanitation—results impossible with wooden equipment.

Loudens Steel Stanchions—the perfect stanchion—light, neat, practically indestructible. Afford cows perfect comfort but keep them lined up. Positive "cow proof" latch, easily opened with gloved hand. No sharp corners—no wood to catch or hold dirt.

Loudens Feed and Litter Carriers cut barn work in half. The handiest things you can put in your barn. One man can do the work of two—do it quicker, better and easier. Run on overhead track. Will earn their cost many times over in a year. Have exclusive Louden Patented features, not found in any others.

Louden Equipment in your barn will not only save your time and labor, but by affording clean healthy quarters and comfort to your cows, increase the milk both in quality and quantity. Your profits increase accordingly.

No amount of work will keep wooden stalls clean and sanitary—no amount of brushing and scrubbing will destroy germs lurking in dark corners. Louden Sanitary Equipment is cheaper than antiquated wooden equipment. Once installed it lasts a lifetime. Used and endorsed by more experienced, successful dairymen and farmers than all others.

There is 40 years experience behind **Louden Quality**—that's the reason you will find it cheaper to equip your barn "The Louden Way" at first and save yourself money and disappointment.

Our catalog of money and labor saving barn equipment **is Free. You Should Have It.** Write for it today.

LOUDEN MACHINERY CO., 663 Broadway. Fairfield, Iowa.

Gathering the Poultry Harvest

From the middle of October to the middle of January the poultry market presents a brisk demand for roasters. This demand is greatest previous to the Jewish feast-days, from the eighteenth to the twenty-fifth of October, and the weeks preceding Thanksgiving and the holidays. For the Jewish feast-days the market demands live poultry. In American markets roasters with cream-white or yellow skin are preferable to those having bluish-white flesh and dark legs. The breeds of chickens having favorable characteristics as to color of flesh, size and weight are the Brahmas, Cochins, Rhode Island Reds, Plymouth Rocks and Wyandottes. The first three named are heavier than the last two.

To command the top price, a roaster must be full grown with flesh having the tender, yielding quality of youth. Birds whose growth has had no interruption from infancy to maturity are most satisfactory. The birds are brought to fine, plump condition by generous feeding of corn and some green food—clover or cabbage. This is fed exclusively for three weeks prior to marketing. For ten or twelve days immediately preceding slaughter the birds are confined. The poultryman who can guarantee that his poultry is grown and fattened without recourse to animal food has an excellent foundation for select trade.

When shipping for the general market, heavy birds from eight to ten pounds in weight are preferable. Special markets catering to wealthy customers vary in their requirements as to weight and in such cases the prospective shipper should ascertain the qualifications before fattening his stock. Light roasters weigh from five to six pounds. When selling direct to the retail market, poultry should be dressed, unless it is otherwise specified. Poultry should not be fed for at least twelve hours before slaughter, but should have plenty of water.

The birds are suspended by the feet and killed by thrusting a sharp blade into the mouth, piercing the artery at the base of the tongue. Additional pressure causes the point to penetrate to the brain producing insensibility. If dry-picked, the removal of the feathers begins immediately before the body cools. Where the birds are scalded to loosen the feathers, they are dipped two or three times in water not quite to the boiling-point, being held there but an instant each time. In either case the feather-stripping must be so skilfully done that the skin remains intact. Bruises or abrasions are detrimental to the sale of poultry. Roasters are clean picked. After picking, the birds are often "plumped" by again dipping in hot water for eight or nine seconds. They are then laid in cold water for half an hour, after which they are dried. Poultry must never be packed warm. The package must be clean.

In the case of live poultry, the shipping-crates should be roomy enough to allow the birds to stand naturally. The sides should be slatted, but the tops of the crates should not allow them to protrude their heads. Large crates should have several compartments to prevent crowding.

While Pekin ducks are the largest, Muscovy ducks are preferable as fall roasters, except for the Jewish market. Toulouse geese are fine, heavy market birds and are in special demand for the holidays. The mammoth bronze turkey is the most popular candidate for favor among his kind. Of late years the price of turkeys has made them a luxury.

M. Roberts Conover.

One-sided rations mean one-sided eggs.

The date on an egg is not what counts; it is the honesty of the man that puts the mark there.

Don't let two cocks claw each other to pieces. Put the matter to arbitration and give each a separate flock.

Those old hens which have just completed a tardy molt will fatten now. Cast up their egg account and make up their deficiencies with meat.

Poultry-Raising

The Poultry-Yard in October

THE young cockerels should be separated from the pullets and the latter fed special laying rations. Give the pullets plenty of range and feed them only at noon and at night. This method induces them to forage in the morning. When confined, corn on the ear may furnish the morning meal.

At noon give any one of the following mashes (the quantity given is sufficient for forty fowls):

Mash No. 1—Two quarts of bran mixed with four heaped tablespoonfuls of beef-meal and enough hot water to make it crumbly. Stir into this a quart of chopped raw cabbage or other green food. Add a teaspoonful of salt.

Mash No. 2—Two quarts of alfalfa-meal and three quarters of a cupful of beef-scrap mixed and scalded together and allowed to stand at high temperature for half an hour. Add an equal bulk of potato-parings chopped fine.

Mash No. 3—One quart of bran, one quart of chopped clover-hay, one tablespoonful of powdered charcoal. Stir in two quarts of skim-milk and some salt.

At night feed the fowls all they will eat of whole wheat and corn in equal parts. If they have access to corn-fields, omit corn at the evening meal and feed all wheat.

See that the nests are clean and freshly lined with straw. If nest-eggs are used, they should have a dull finish. The glassy kind do not deceive the experienced hen. Each hen lays with a purpose. Her eggs are the foundation of a future family, and when she finds her products continually removed, she becomes disgusted and seeks a hiding-place for her nest. Seclusion is essential to a good nest from a hen's point of view and the poultry-keeper must screen them. Egg-collecting should be performed as inoffensively as possible.

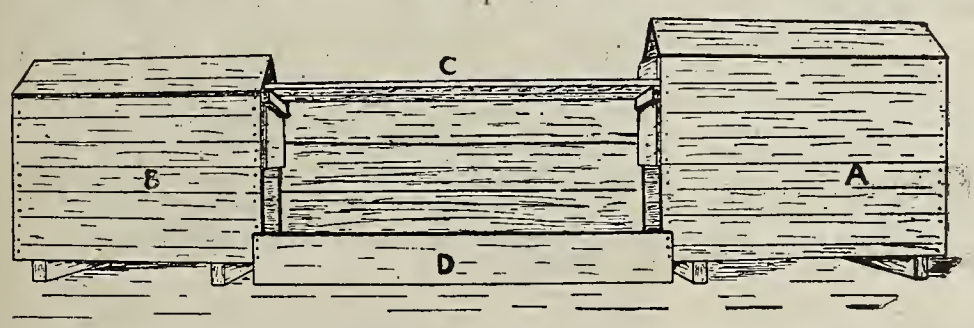
The young roosters which are to be roasters in November should be allowed plenty of room in which to exercise so that they may grow large of frame. Whole wheat and skim-milk are growth-promoting foods and should be fed generously.

M. ROBERTS CONOVER.

A Small Scale Success

A WOMAN whom I supplied with eggs said to me, "I wish I had some place where I could keep a few hens and not pay out so much for eggs." Here is how she solved the problem and had eggs to sell:

She got two large boxes and set them on some blocks in the back yard. One box (A) was about four by three and one half feet and three feet deep. This was placed on its side, the upper side taken off and a roof put on. The box was then lined with building-paper, and the lower half of the front taken off so the hens



could go in and out. This was used as a roosting-room where she put thirteen hens, mostly Plymouth Rocks.

The other box (B) was somewhat smaller and was placed about six feet from the roosting-room. This was fitted with nests and was used as a laying-room.

The space between the two was boarded up at the back, and a shed roof (C) put on. The front was left open with the exception of a board (D) nailed across the bottom. The floor of this scratching-shed was covered deep with litter, in which the hens' feed, mostly whole grain, was scattered. The place where the hens went into the roosting-room was left open throughout the winter. These hens laid from six to thirteen eggs a day during the winter. Their drinking-water was in the shed, from which they could go into either room.

M. L. PIPER.

Eggs Every Winter's Day

ABOUT October 25th we set up fodder against the north, east and west sides of the hen-house to make it warmer, leaving the south side open for air and sunlight.

Of course, we had already cleaned out the old nesting, burned it and made fresh, clean, new nests and exterminated lice and mites—cleanly conditions to be maintained throughout the winter, by keeping the droppings well cleaned out, the nests fresh and clean, and fighting parasites.

Next came the scratching-shed, without which it is impossible to secure satisfactory results. The scratching-shed provides a shelter in which to exercise on stormy days. Last season we had the shed a short distance from the poultry-house. The birds quickly learned where their feed was given, and would make for it as soon as turned out, regardless of the weather. The shed should join the roosting-house, however.

Our scratching-shed last year, once had been used as a cow-shed. We closed with fodder the east and west ends and the north side, running a wire around to hold the fodder in place. The south side, here in Missouri, can be left open for sunlight and fresh air. In the shed were a vessel containing grit and a box filled with wood-ashes for the dust-bath and charcoal, both important to the fowls. The dust-bath should be provided for before the ground freezes, by securing a supply of fine, dry dust from the road or fields and storing it where it will keep dry. Mixed half-and-half with wood-ashes, this will make an ideal bath for fowls and helps in the fight against lice and mite pests.

Sixty-five fowls had for breakfast about two quarts of cane-seeds (left on the heads) and five ears of corn, hacked up with an old ax and left on the cob, all scattered in several inches of clean straw in the scratching-shed. We prefer three quarts of whole wheat to the cane-seeds, but we wanted to utilize the latter.

Every few days we changed the straw to keep it clean and prevent it from freezing and matting together. At noon we fed a warm mash of skim-milk, shorts or bran, table-scraps and boiled potatoes, the latter being culls and small ones. We found a gallon of this mixture quite sufficient for the sixty-five fowls. A level tablespoonful of salt and a teaspoonful of soda were also added as a sort of tonic.

Just before the fowls flew up to roost, they were given three quarts of shelled corn and a quart of sunflower-seeds, the latter acting as a laxative. This was also fed in the litter, but not deeply covered, exercise at this hour not being so necessary as in the fore part of the day.

Drinking-water, with the chill taken off, was given early in the morning and just after noon. In the morning a gallon is about what the sixty-five will drink up clean. Don't allow the fowls to go without water nor to drink it ice cold. A bit of copperas or sprinkle of cayenne pepper is good added to the drinking water.

Sometimes we threw a pumpkin into the shed or hung a cabbage, turnip or beet to a post, near the ground, and let the birds peck at it. Occasionally we hung pieces of a rabbit where they could get to it, but where one has plenty of milk, very little, if any, meat will be required. In fact, we made up our minds that meat, when the fowls had plenty of milk, was a detriment, and finally discontinued it, feeding about a gallon of pure milk each day. In the absence of plenty of milk, meat must be supplied regularly, about three times a week.

Had we made provision for a supply of green vegetation and green bone, it is likely that we would have increased our profits, but since most people will not make the small outlay necessary to provide these extra rations, the plan as outlined above will appeal to the ordinary farmer as being easily carried out with little or no extra expense. For this reason, we wish to emphasize the fact that by this plan we got eggs every day last winter, having some to sell at the highest price recorded during the season.

After constant laying through the winter, our hens became broody very early this spring, and began sitting as soon as it was safe to set them, and our earliest pullets began laying early in the fall. Our fowls molt early, for the same reason that they begin sitting early. They are pretty well along with their molting by August, so that they can begin fall and winter laying several weeks in advance of most flocks on the farm.

M. A. COVERDELL.

Amatite ROOFING

Buy It—and You'll Never Need Roof Paint

When a man is under the necessity of using a lot of roofing, he is pretty sure to study the subject with great care.

That is why Amatite is so often used on the big ready roofing contracts.

A man who has only a few hundred feet of roof will often be careless in his choice of roofing, but when it comes to thousands of square feet, (as above) Amatite is sure to be used.

The following is a typical instance:

Waterbury, Conn.,

Barrett Manufacturing Company.

Dear Sirs:—We wish to inform you that the "Amatite" Roofing which we have used on our office, store house, lumber shed and barn has given most satisfactory service.

The area that these roofs cover is about 15,000 square feet. The roofing is unusually attractive in appearance, and in our judgment is the most durable and satisfactory made. The fact that it requires no painting appeals to us very strongly, and this feature makes it by far the cheapest ready roofing on the market.

CITY LUMBER & COAL COMPANY.
[Signed] F. B. Boardman, Treasurer.

The economy of Amatite is not only in its durability and its price (lower than any other mineral surfaced ready roofing on the market), but also in the fact that *it requires no painting.*

You may be sure it would cost something to paint their big roofs if they used a roofing that needed painting. All that is saved with Amatite.

A sample of Amatite will be sent you for inspection free if you will send name to the nearest Barrett office at once.

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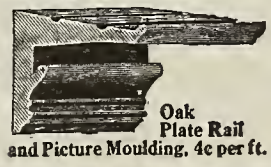

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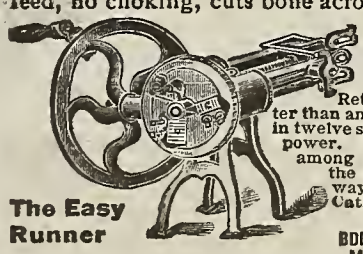

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FARM AND FIRESIDE

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WE ARE rather proud of this Harvest Home number of FARM AND FIRESIDE. How do you feel about it? It is a sort of "different" number. It lifts farming up into its true place as a large part of the world's great task of making a living. In it you survey the whole earth and see humanity's huge task and your own part in it. We feel our own vision broadened and our vocation glorified by this going up into the mountain and surveying the kingdoms of the earth. We hope our readers will share with us in this pleasure and benefit.

* * *

If a thing is worth while, it is probably worth lots of while.

You can never tell how good a home may be by the looks of the house.

A really lazy man who forces himself to work hard is deserving of a good deal of credit.

One reward that comes from scientific farming is the enrichment of the mind of the farmer.

When it comes to a choice between buying some new tool you need on the farm and putting the money in the bank, better buy the tool. It will help you gain the money back and save toil into the bargain.

The Bacterial Count in Milk

FIRST in one place, then in another, breaks out the city agitation for purer milk—and it exists in all cities all the time in a more or less acute form. People who would not have known a bacterium if they had met it face to face five years ago, now grow eloquent at the number of bacteria in each cubic centimeter of the morning's milk.

They have even found out that a cubic centimeter is a block of milk about the size of the cube you could square up out of a half-inch board—and it seems to them that half a million of bacteria in that space is plenty, in which opinion farmers may well agree with them. The question is, what to do about it.

The microbe warfare is most acute now in Philadelphia, where the papers are spreading the news that most of the milk consumed has from thirty million to fifty million bacteria (or microbes) to the cubic centimeter. This seems like peppering them in pretty thick—and it is.

This newspaper and board of health warfare against a high bacterial count in milk is of immense interest to dairymen. The bacteria are sown in the milk after it comes from the teat, mostly, and it mostly comes from impurities. We may say, and say truly, that they multiply in transportation and that no such enormous numbers are found in milk when it leaves the farm. This is true; but the seed is sown on the farm. Anyhow, the bacteria that get in on the farm are the only ones that we have any concern with as a matter of dairy practice.

To get the last bacteria out of the milk is impossible, in the absence of Pasteurization, but we can keep the swarms down to the harmless number of half a million or so per cubic cetimeter, by improvements in barns and methods. It will be expensive, and few farmers can get to the ideal conditions at once; but all should study the matter in the spirit of coöperating with the demands of the health officers, rather than that of objectors. Objections are natural; for the dairy inspection of cities is at present very largely an excuse for annoying dairymen with requirements that all parties know are not within the reach of the industry, unless customers are to pay much more for milk than they now do. It is useless for boards of health to ignore the fact that expensive improvements must in the long run be paid for by those for whose benefit they are demanded. The agitation for better milk, however, will, in the long run, be met by a supply of better milk, as it should be. The dairymen who meet it first will be best paid for their pains—if they have adequate selling facilities. And the time will come when those who have not improved may be heavy losers.

Washing potatoes before selling takes time; but it saves time in the selling.

Put scrub apples, not in the middle of the barrel, but in the middle of the hog-lot, where they belong.

If you think you have a bright idea, you are the fellow to prove its value before handing it on to others.

What would encourage the boys and girls more than to give them a colt, calf, lamb or pair of fowls and let them try for some of the various premiums offered at the fair or institute?

Window and door screens, like machinery, are allowed to rust out during the winter and early, wet spring months more than they wear out. Put them away where they will not get damaged until they are needed next summer.

How to Sell on the Bulge

THE price of spot cotton reached twenty cents the other day—the highest price since the war. We hope all our Southern subscribers had cotton to sell at that price; but probably few had. It is depressing to note—from the viewpoint of the man who hoes the crop—that December cotton was selling at the same time at less than fifteen cents. The answer to the riddle is that cotton is much lower when you have it than when you haven't. Hogs touched eleven cents last year—but few of us had any at that time. That is why they were high. The problem before us is to find some means for holding our cotton, wheat, corn and stock, so as to prevent the flooding which makes prices low, and to take some of the profits when they are high. There is only one way, and that is the way of coöperation by organization.

* * *

If the boys and girls start to school with an insufficient supply of books and pencils, you may expect them to build their education much the same as a carpenter with poor tools builds a house.

The United States Department of Agriculture has published a report on agricultural conditions in nineteen counties in southern and eastern New York. The hill lands have depreciated from one fourth to three fourths of their original value. Why not keep more sheep and fewer dogs on these lands?

A Common-Sense Weed-Seed Cabinet

MOST of us would be astonished if we could be suddenly shown the extent of our ignorance in some matter which ought to be of common knowledge. How many of us could tell the seed of purslane from that of portulaca? One is a pernicious weed, the other a garden flower. Could you pick out the seeds of quack grass or wild oats if shipped you in a consignment of seeds; or would you sow them, presuming that they were harmless things or undeveloped specimens of grains?

But if you had a cabinet of seeds with which to compare the ones suspected, it would be easy. The Minnesota Experiment Station has invented a weed-seed cabinet which can be sold to the farmers for fifty cents for each twenty-four kinds of seeds. The seeds are collected and placed in little compartments like those made by cutting gun-wads out of pasteboard and pasting a back on the board. Glass is laid over these so as to hold the seeds and at the same time make them visible. Two cabinets may be placed back to back, doubling the number of specimens. With any ordinary magnifying-glass—or even in most cases with the naked eye—suspicious seeds may be compared with those of the real pests and action taken to protect the farm.

We often see glass cabinets of sea-shells, quartzes and other curiosities kept in the house for show. How much better such a seed-cabinet as this will prove. Every farmer should begin to think about collecting and preserving the seeds, plants, insects, eggs and larvæ which constitute his aids or his enemies. These are the common-sense show cabinets. And every rural school should have a complete collection of such things and make constant use of it.

The Price of the Buzz-Wagons

AN ESTEEMED correspondent argues that the prices of motor-cars are not likely ever to be much lower than now. We seem to remember the time when bicycles were selling for a hundred dollars each as fast as they could be made and similar arguments were rife. In this connection, we read that the manufacturers of a low-priced car at Detroit have just declared a cash dividend of one hundred per cent. Some time the business will be ahead of orders, instead of behind them, and then, we suspect, something will happen to prices and hundred-per-cent. dividends.

* * *

Talk things over with the hired man; it will help both you and him.

A small plot of rich land produces more crop than a larger plot of poor land, and costs less in taxes.

With about nine hundred local and seventy-five county Granges, Michigan is doing much good work for farmers and for farmers' wives. The Grange is the leading farmers' organization in the state.

Reading and thinking about the sins of the grafters in public office never lightened the taxes or elected a good man to office. Read, think, talk with the neighbors and then go out and put what you think into practice with the ballot.

The Value of Publicity

PRESIDENT RIPLEY, of the Atchison, Topeka & Santa Fé Railway Company, recently testified at a rate hearing that the Interstate Commerce Commission now practically keeps the books of the railways. This is not exactly true, but there is some truth in it. The books of the railways are kept according to rules laid down by the commission. And it is a mighty fine thing they are. The people whose bread and butter depends on the things recorded in these books are entitled to gratify a pardonable curiosity as to what they contain.

As proof of the value of publicity, we may point to the fact that we have the data by which to check up Mr. Ripley's testimony and the reports of the falling off of the net revenues of the road. The Interstate Commerce Commission experts have already suggested that Mr. Ripley has included in ordinary operating expenses outlays for permanent improvements. The farmer who builds a barn does not take the cost of it from his income and thereby prove that he has not made a living that year. He charges it to permanent improvement. The barn is a part of the farm that he has newly bought. Through the publicity feature of the railway law, we may be able to prevent the railways from taking the barn out of the income and swearing that they haven't made a living.

All we want to know is the truth. When that is known justice will be done to all parties—including the railways. Nobody wants anything else—on the shippers' side of the controversy, at least.

* * *

After the ground freezes up, you'll wonder why you didn't set those posts while you had the chance.

In point of grain production, the following states now lead all others: Illinois, Texas, Iowa, Kansas and Missouri, Ohio being sixth.

The "Guaranteed Pack" in West Virginia

THE movement for better fruit continues. The West Virginia Horticultural Society is furnishing to growers of apples who are deserving of it an official label which guarantees that the package on which it is placed contains nothing but "well-grown, carefully hand-picked apples, not less than two and one half inches in diameter and of one variety, normal in color and shape, and practically free from fungus growth or insect injury, bruises and other defects not incident to careful packing." The future of the fruit industry is to be determined by the honesty of the pack. The West Virginia movement is good. It is to be hoped that progress may continue until every Eastern orchard may adopt that Western slogan: "Find a bad apple, and we give you the car!"

The FARMERS' LOBBY.

By Judson C. Welliver

A CHASTENED and subdued Congress will come back to Washington in December. Nominally, it will be controlled by Aldrich-Cannon forces, just as it was last winter. In truth, however, the Aldrich-Cannon element will have been emphatically repudiated by the Republican party, and the Republican party, in turn, will probably have been repudiated by the country.

There is about as much excuse for the old Congress to meet again, in view of late developments, as for Mr. Cannon's rules committee to forbid Halley's comet to drop its tail next time it scoots past. The mandate of the old Congress will have expired. There is no work which it is competent to do that the country wants done. There is no end of work which the country wants done, which it is incompetent to do. The country will have to fold its hands and wait for thirteen months after it shall have decreed a new régime before it will see results. Louis XVI. returned to rule France as president of the present republic or Charles I. trying to solve Britain's present-day problems from the throne of George V. would not be more pathetic anachronisms than Cannon, Aldrich and Hale will soon present in Washington.

A Common-Sense Amendment

The idea is gaining ground that the constitution ought to be amended to do away with this long wait between election and Congress, so that the new Congress would be sworn in December 1st or January 1st following its election. This would be vastly better for the country and fairer to both parties. Under present methods, when there is a change of party control the incoming Congress loses half its working time. It gets only one session in which to "make good" with the country before it must face another congressional election.

There will be strong effort in the next two years to accomplish such a change. To assume that the constitution can't be improved is to insist that the world doesn't move and people don't learn; a theory which is suffering hard knocks all along the line.

Under such a plan Aldrich, Hale, Burrows, Depew and the rest of the Old Guard would be spared the exquisite torture of sitting through a session after they had received the verdict against them. Their most effective weapon has ever been the sneer. Marvelously adept in it, they have had small need of protection against it. But now the sneer will be pointed in the other direction, and it will require a nobler fund of Christian forbearance than I think they possess to keep men like LaFollette, Cummins, Dolliver and Beveridge from playfully tossing back a few of the darts of cynicism and sarcasm that they have plucked out of rankling wounds in their own skins. And they are some tossers, at that.

Take Dolliver. He took two years ago the job of discrediting Nelson W. Aldrich and driving him out of public life. He and LaFollette first demonstrated the studied, devious dishonesty of the pretense that the Aldrich cotton schedule, in the tariff bill, did not raise the duties on cotton goods. He and Bristow went into the motives back of the increased duties on rubber goods, showing that Aldrich and his son are in the way of making immense profits out of the family power over tariff rates. I have never seen men go more cold-bloodedly about a deliberate task of breaking down a reputation and wrecking a career. These insurgents did not inaugurate that sort of fighting, but they went at it, hammer and tongs, when once convinced that either they or the Old Guard was to be destroyed. Aldrich and his lieutenants utterly underrated the abilities they had driven into rebellion. They completely misjudged the public temper and attitude toward themselves. They did not realize that a whole nation was standing ready to applaud and sustain whoever should have the courage to defy them.

Two Brands of Stumbling-Blocks

And I doubt if they realize it now. Hale believes as honestly in the divine right of senators as William the Sudden of Germany does in the divine right of kings. And why not? He is only a little more than a hundred years away from the constitutional convention of 1787, in which a majority believed that an aristocracy is necessary in government and made us a quasi-aristocratic senate. As for Aldrich, he began life in a grocer's shop, rose to be a grocery jobber and has been for a generation applying the statecraft of the grocer to the problems of government. As Hale believes that an aristocracy ought to rule, so Aldrich is, after his insincere fashion, sincere enough in the belief that business ought to rule—must rule—the country. In him we see the sublimation of the money-grubbing shopman, the projection of sugar-sanding and short-weighting into the sphere of legislation, economics and sociology.

The American House of Lords

The new Senate is going to have leadership of men and ideas, not the boss-ship of a man and his interests. I recollect one day a year or two ago when Senator Clapp of Minnesota rose in his place one afternoon and moved that the Senate do now adjourn. There was panic among the regulars instantaneously, because the motion to adjourn must always come from one of the insiders of the "steering committee." It used to be the sacred prerogative of William Boyd Allison. Latterly it has been the function of Hale. He might delegate it, but none must usurp it. So when Clapp, a rank outsider, moved to adjourn, there was panic. What could it mean? Was insurgency suddenly broken into rebellion? Did it have some deep, dire, awful signification? There was nothing more to do that afternoon, it was true. No reason existed why the Senate should not adjourn. The motion would have been made by a regular, in another minute. But the idea of an outsider presuming to make it, to take a hand, even an interest, in the conduct of routine functions, was unthinkable and alarming in the last degree. The regulars jumped up. Objections were made; the Minnesota man was urged to withhold his motion a moment; an avalanche of reasons for not pressing it were urged. And at last there was actually a roll-call on that motion; not because there was any objection to adjourning, but because it would never do to allow the senatorial rabble to interfere with things essential to maintaining discipline! There will be no more of this in the future. The senate is going to start on the experiment of running itself, and the house is going to do likewise. The rules will almost certainly be amended to provide that the house shall elect its committees, instead of the speaker appointing them. That, with the rules already adopted by which the speaker's control of the order of business has been weakened, will open the way for self-government in the house.

An Insurgent President?

Talking about these insurgents, you know there is suspicion that some of them are willing to be president some day. Theodore Roosevelt's activities have had a bearish effect on presidential stocks of other aspirants; but Mr. Roosevelt has not yet said that he is going to run. I am not so certain that he will, as are many. The tone of his speeches strongly suggests aspiration, but it is yet near two years before a candidate will be nominated and a vast deal of political water will pass the mill in that time. Mr. Roosevelt could have been reëlected in 1908 and declined. Whatever it may have been, the same motive would seem to obtain as to 1912.

I happen to know a few things about Mr. Roosevelt's attitude toward the next nomination that may be interesting. If he is not a candidate, he will have a candidate. He will not be for Taft. He will be for Dolliver of Iowa, unless things change. He regards Dolliver as the most available "progressive," the one most agreeable to himself and the one whom he would be best pleased to support. He has never liked LaFollette nor Cummins, but has long been fond of Dolliver, the man who did more to accomplish the formulation and adoption of the Dolliver-Hepburn railroad bill than anybody else. They campaigned together. There is reason to believe that either would rather support the other than anybody else. Mr. Dolliver's closest friends understand that he does not take seriously the talk of himself for president; he considers that it is not "in the cards" for him to win the highest office and, further than that, he believes that Mr. Roosevelt is destined to become the manifest leader of insurgency and the presidential candidate in 1912.

With the recent sweeping victories for the insurgents a new element is coming into control of the national Republican party. That is the first lesson from the results in Maine, New Hampshire, Michigan, Wisconsin, California, Kansas, Iowa, Idaho, Indiana and other commonwealths. States which have not been swept over to insurgency are largely doubtful, like Massachusetts, Connecticut, New Jersey and Ohio. And this year Democratic victories, no less than insurgent victories, point the way to reorganization of the Republican party, if it is successfully to bid for the confidence of the nation.

If the Democracy gain control of some Northern legislatures in this year's elections, some far-reaching political results may follow. Almost every Northern state is gerrymandered now so as to make the most of Republican strength and minimize the number of congressmen or state legislators that the Democrats may win. As soon as the census returns are known, Congress must make a new apportionment of the country for representation in Congress, and the state legislature will also reapportion their states for representation in the legislature and reorganize its congressional district lines in accordance with the assignment of representation in the lower house. If the Democrats get the next Congress and the next legislature of Ohio, for instance, we may expect that they will transfer the boot, neatly but insistently, to the other leg; they will fix things over with the particular purpose of making the state just as Democratic as possible, and will reshape the lines of the congressional districts with the purpose of gaining a few members of Congress for the Democrats.

Entrenching the Victors

The gerrymanders of Northern states give the Republicans, to-day, a big advantage in electing congressmen, senators and legislators. Reverse these gerrymanders in a group of states which this year are admittedly close, like New York, Massachusetts, Connecticut, New Jersey, Indiana, Ohio, Illinois, and so on, and the disparity between the strength of the two political parties will be well-nigh wiped out. And that is the thing which is going to happen in every state of which the Democrats get control. It will be one of the most important matters, politically, involved in this autumn's elections, and it is a curious fact that so little attention has been paid to it. Before another year is past we will hear a vast deal about it. It will give permanence to new political conditions and introduce new elements into all calculations on the political game.

Another tremendously important result that may follow the election of this year relates to the fact that thirty or thirty-one states have adopted the necessary resolution calling upon Congress to arrange for a national constitutional convention for the purpose of considering and proposing amendments to the United States constitution. A few more such demands, and the constitutional requirement that when two thirds of the states shall make this demand for such a convention Congress shall call it, will have been complied with. Owing to technicalities there is some doubt as to the number of effective resolutions passed by state legislatures, but it is certain that the number is almost enough.

The States Will Make Themselves Heard

Let many Northern states go Democratic this year and we may expect that this resolution for a congressional convention will be passed by enough more states to compel Congress to act. It is no secret that the Aldrich-Cannon forces have intended, if ever that resolution was passed by the necessary two thirds, either to ignore it or to trump up technical reasons for not acting on it, and it has long been understood that while the power of the old line managers continued at Washington, there would be no constitutional convention. The states might demand it and might clamor for it till doomsday, but they wouldn't get it.

Whether we favor or oppose a constitutional convention, we might as well recognize that we are getting a lot closer to one than we have ever been since the adjournment of the convention that made our fundamental law. A Democratic, or a Democratic-insurgent, Congress would surely heed the mandate of the legislatures for a constitutional gathering; and once called, it would be a most important affair. There would be a tremendous struggle for its control, exceeding in bitterness and determination the utmost rigors ever injected into a national political campaign. The stake would be more important than the presidency. There has been no amendment of the constitution since the years immediately following the Civil War, and there is a growing force of belief that the constitution would well stand some modernizing. Mr. Roosevelt is himself a very respectable authority on that point, and he seems to be enjoying quite a suggestive popularity in these United States at this time.

To Celebrate the Harvest Home

By Mary Dawson

Illustrated by Maude T. Thurston

It is becoming more and more every year the custom to celebrate the beautiful mellow season of the Harvest Home by a merrymaking in which "good neighbors all convene and join."

Especially in the country where all the treasures of Nature's fall cornucopia are to be had for the asking is a Harvest Home frolic bound to be a huge success. The girl whose pocket money is limited can arrange such a festival practically without expense, since the only appropriate decorations are those which the country furnishes free of charge and the most appropriate refreshments really truly country goodies, such as cookies, nuts, sliced cold chicken and cider.

A Barn Frolic

A good plan for making the entertainment as inexpensive for the guests as for the hostess is to combine the idea of the feast of granaries with that of a poverty sociable. One bright girl arranged her jollification in this way and it certainly made a great hit: For the invitations she obtained some sheets of the brown paper used by butchers. This was cut into little folded sheets with roughly jagged edges and on each was written the invitation containing a request for "country costume."

For the scene of the fun she hit upon the airy loft of a large barn. When this had been tastefully decorated with country trophies, no ball-room could have been prettier. A wainscoting of the yellow maize with tassels intact was arranged to go completely around the loft. Above this were choice branches of tinted leaves, while across the ceiling were swung ropes of corn ears wired together, scarlet cords of red peppers, tiny pumpkins and gourds in artistic medley.

The loft was lighted by carriage-lamps shining out of clusters of autumn leaves and grain. The center of

Supper Served Cobwebwise Never Fails to Amuse

the floor was cleared for dancing, but elsewhere soft clover-hay was scattered, while bales of straw and rustic-looking chairs provided seats for those who wished to rest.

Taking their cue from the invitation, the women came wearing calico frocks, gingham aprons and sunbonnets while the men wore blue jeans, negligée shirts and broad-brimmed hay-makers' hats. On the appointed evening more than one gay crowd of merrymakers drove up in hay-wagons, the din of tin horns and bells resounding merrily along the country lanes.

Games That Were Played

As soon as all were on the scene little paper bags were distributed and players were asked to search for the nuts hidden under the hay and straw. Men and women searched as partners, each couple sharing a bag and laboring to fill it. After the search, the nuts discovered were cracked and enjoyed by those who found them. The discovery that many of the walnuts and peanuts contained funny little fortunes worded in rhyme was a surprise. Although written impersonally, many of the jingles unconsciously hit the mark in a most laughable way.

Boxes of particularly good home-made cookies were next offered as rewards of merit in a variety of amusing "stunts." For one test they ate very dry crackers and then sang a verse of some song or whistled a tune according to the sex of the vocalist.

In another round the young women wrote three hundred words on "How to Choose a Husband" while the men became didactic authors to the same extent on the subject of "How to Choose a Wife." There was also a doughnut-eating contest where the toothsome little brown circlets depended from the ceiling by strings and the contestants ate with hands tied behind them, and another game where each sex in turn held their hands aloft above a screen, the respective owners to be guessed by members of the opposite division. It was all extremely jolly.

Midway between the games and the refreshments came the old-fashioned square dances, the Lancers, Virginia Reel, etc., with an orchestra composed of banjos, accordions, Jew's harps and other small instruments which had previously been rehearsed in unison before the program started.

Supper was served at long tables made of boards stretched upon trestles. White crêpe paper with a border in a design of autumn leaves was substituted for a cloth. The centerpiece was a huge pumpkin cut to represent a basket with a handle and filled with fruit, including the always graceful and lovely sprays of purple grapes and grape-leaves. Tiny purple and white cabbages hollowed out and lined with crêpe paper held respectively salted nuts and home-made candy. The candles, with which the tables were lighted, were fitted into little hollows in the tops of large carrots, the stem end of these being cut away to make them stand securely.

In the way of refreshments there were cold sliced chicken, milk biscuit and fresh country butter a-plenty. Hot lemonade and cider formed the drinkables. These were served with home-made cake and fudge and were followed by the true Harvest Home course of nuts and fruits.

Supper served cobwebwise never fails to amuse. For this the table is spread, but viands are missing. Each person is given the end of a long string as in the ordinary cobweb party and this he must disentangle little by little in the usual way. At the end of each cord when straightened out some edible part of a supper is found. One player will perhaps discover a plate of sandwiches, another a dish of fruit, another a bag of nuts or candy, and so on. Each one carries her trophy to the general table and the hostess provides the accompanying beverage.

A Corn Feast

Another pretty way to mark the garnering of Earth's bounty is by a festival in honor of King Corn.

For this invitations may be written on corn-colored paper or on paper decorated with tiny pen-and-ink sketches of corn-stalks or they may be rolled up like scrolls and tucked away in yellow husks made of crêpe paper to represent ears of corn. If the little biddings will be distributed by messenger, this last idea is extremely effective. For passage through the mail it is less handy.

Here again the dry corn-stalks make an appropriate background. Bank the corners of the room with them and draw through them the stems of scarlet tissue-paper poppies, which can be easily whipped up in odd hours at home. Have a frieze for the wall of the dried corn-ears with husks partially pulled back and an occasional red specimen to emphasize the effect. These are easily dyed by boiling a piece of turkey-red cotton in water and dipping them in the solution if they do not occur plentifully in the husking. At one end of the room have a tent effect made of corn-stalks under which one of the girls, costumed, say, as Minnehaha, tells fortunes or reads palms in intervals between the games.

The first game of the program might be a mock auction where the players bid in little bundles, using dry corn-kernels as money. The little packages should be prepared in advance and there should be as many of these as there will be guests. It is not necessary to expend any money upon the contents. Fill them with cornucopias of sugared pop-corn or fudge, home-made pincushions or needle-books, grass baskets, funny fortunes in rhyme (which may be illustrated, if you like, with absurd sketches), headdresses made from tissue paper, etc., and the amusement will be just as great as if more expensive articles were inclosed.

Some one who is clever at extemporary speaking must act as auctioneer, mounting on a chair or table. This person is aware of the contents of the little bundles and "talks them up" in a way which will give some hint of their contents to any one clever at guessing. Before the auction begins each player should receive fifty grains of corn, representing an equal number of dollars, with which to buy in any bundle that appeals to his fancy. The contents of the bundle bought belongs permanently to the one who expended his or her corn money for them.

For another game have a large glass jar filled with corn-kernels, preferably of different colors—that is, the coarse yellow, the blue sugar corn and a red ear stripped. Let the competitors guess the total number of kernels in all colors, and also the number of yellow, blue and red individually. Decorate a calendar or a blotter with a design of corn flowers to give as a prize.

A jolly scramble game is where each player receives a tumbler and two large pins, and dishes of dried corn-kernels are placed in the center of the big table around

A Mock Auction Where Dry Corn-Kernels are Used as Money

The Merrymakers Drove Up in Hay-Wagons

which all sit. When the signal is given all begin to dip the corn-kernels into the glasses, using the pins to do it with. The man or woman whose tumbler is most nearly full when the supply of corn is exhausted wins the game.

The supper which rounds out the feast can be full of corn-y suggestions. For instance, there could be cold-corn-ed beef and corn-bread or corn-meal griddle-cakes (with maple syrup) and coffee and sweet, sugared or molasses pop-corn.

An Outdoor Celebration

Those of you who have never celebrated an autumn holiday out of doors have a pleasure yet in store. The fall atmosphere may have a chilly tang, especially the evening, but the bonfire on which the supper is cooked radiates a genial warmth, while out of its radius, stirring open-air games keep the blood in circulation.

A country friend recently described to me such a pretty entertainment held in the open air at the time of the Harvest Home! A brief account of it may help out some young hostess whose plans are not yet worked out in detail.

Some of the men of the party collected the firewood and built the open-air blaze with its forked stick for holding the kettle, and when their preparations were about completed, with a merry jingling of bells, a little cart came trundling along in the direction of the fire. This was drawn by four young men of the neighborhood and it was decorated with ribbons and was piled high with straw and autumn leaves. On the top of it sat a popular girl dressed as the Queen of the Harvest, who, when the cart stopped, descended from her perch, bringing with her two baskets containing different fruits and vegetables and other provisions to be used for the supper.

The arrival of the cart was received with prolonged cheering, after which all fell to with a will to prepare the feast. While the young women cut the bread and made the sandwiches, etc., the men roasted the corn and potatoes, and boiled the kettle on the impromptu crane.

After the feast more wood was added to the fire. The company gathered around it, roasting chestnuts and swapping stories, jokes and riddles. Of course, there were romping games in which all took part, and also, of course, they danced in a circle around the decaying blaze and sang old-time songs in chorus.

A Kitchen Party

Lucky the girl whose home boasts a large and genuinely old-fashioned kitchen which mother can be persuaded to give up to the young people for a single evening. It will make a charming setting for the Harvest Home sociable. Send out invitations written on little vegetable shapes cut from heavy paper.

Decorate the eaves with ropes of onions, red peppers or any vegetables strung together and caught up at intervals with purple or white cabbages to look like comic rosettes.

Prepare in advance a huge bowl of batter for pancakes. Each man of the party can be detailed to bake a single flapjack, the girl (his partner) assisting him with advice only, and the best cake made by any couple to win prizes for both of those who had a hand in it.

The girls will probably want to make fudge and roast chestnuts in the oven, so that the good mother's stove will play an important part in the merrymaking. Coffee may be served with the flapjacks or hot lemonade and cider afterward.

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The Housewife's Letter-Box

Have you been looking for a special recipe for years? Do you need any information on household matters? And do you meet with little problems in the home that you wish some one would solve for you—some one who has had a little more experience than you? Then, why not make use of YOUR OWN department and ask the questions which have been troubling you? The editor has given you this page for your very own, to edit and make just the most helpful page that has ever been published for housewives. This department has proved that the spirit of helpfulness is abroad in the land, especially among the women of the farm. That our readers have the mutual desire to help one another is evidenced by the large and prompt response we have had to the questions which are printed here monthly. There is no payment made for contributions to these columns. All answers and inquiries should be addressed to "The Housewife's Letter-Box," care of Farm and Fireside, Springfield, Ohio.

Questions Asked

Will some one please tell me—

How to permanently rid our yard of sheep mint? N. F., Virginia.

How to destroy ants around raspberry-bushes? Mrs. P. L., Wyoming.

How to get rid of red ants in my kitchen cabinet? Mrs. W. S., Ohio.

How to extract the essence of oil from peppermint and bergamot? A Subscriber.

How to wash a red and white Irish chain quilt so that the colors won't run?
Mrs. J. H. S., Washington.

Why I have to churn my cream from five to six hours before the butter will come, and then I can scarcely get butter. The cow is on good pasture, has plenty of water and salt, and we feed her plenty of bran.
Mrs. O. M. K., Illinois.

Mrs. E. F., Kansas, would like to have some of the readers of the Housewife's Club give their experience in canning vegetables.

Will some reader please give me a little information about the Rocky Mountain cherry? Is it hardy and worth my time to cultivate? Mrs. J. H., Indiana.

Questions Answered

For H. E. S., Texas

I generally use about a half pint of gasolene and two ounces of gum camphor. You can buy a half pint bottle of the gasolene. This mixture will not leave any stain and is not a bit offensive to the smell. It will rid any house of bedbugs in a very short time. Subscriber.

For Q. P. D., California

Here is a recipe for peanut-butter which was printed some time ago: Shell and grind any number of peanuts. Melt enough butter to sufficiently hold the ground peanuts together to make them spread well. Mix the butter and the peanuts, adding the butter until the mixture becomes pasty.
A Helper, Wisconsin.

For Mrs. J. M. B., New York

I have never heard of any one bleaching yellow hair white. Of course light hair can be lightened by washing it in peroxide, but it is most injurious to the hair. So my advice to you would be: Leave your hair alone. Bleaching cracks the hair and makes it lusterless and dry looking and, to my mind, anything that is artificial is not pretty. If you have a good healthy head of hair, you would be foolish to attempt to change its color. If you give the hair time, it will turn gray of itself, I feel quite sure. Editor.

For D. A. W., Ohio

To wash quilts, make strong suds of soft water, as hot as you can bear your hands in. Put in a large tub, then put the quilt in and work it about with the hands, pressing it down under the water and forcing the suds through. The ends of the comfort may need to be washed on the washboard until clean. Squeeze the quilt well, then rinse in three or four waters and hang it out on the line dripping wet. Do not wring, for it will take the fluff out of it. I have washed five comforts this way and am well satisfied with the results. Mrs. R. H. B., Michigan.

For Mrs. A., Ohio

Here is my way of baking beans. Pick over one quart of beans. Let them soak overnight. In the morning drain and cover well with cold water. Cook slowly until the beans have boiled about ten minutes. Stir in one teaspoonful of soda and let boil five minutes longer. Drain, cover with hot water and cook slowly until the beans break open. Then stir in a rounded tablespoonful of salt and a half cupful of sugar. Put in a crock and cover the top with thick slices of salt pork and bake in a slow oven until nicely browned. If the beans are cooked too hastily, they get mushy and are not so good as when whole. I have used this recipe for years with good success. Mrs. B., Michigan.

Yeast Recipe, for Mrs. F. D. W., Maryland

I believe this is the yeast recipe you desire. It was printed in the June 10th issue:

Yeast Requiring no Starter—Boil one ounce of hops in two quarts of water for half an hour and strain. When lukewarm add one half cupful of brown sugar and one tablespoonful of salt. Mix a scant pint of flour with some of the hop-water and gradually add all the water. Keep this batter in a warm place for three days. Stir frequently while it is working. On the third day add one and one half pounds of potatoes boiled and mashed. Let stand another day, then strain and it is ready for use. The yeast will keep four or five months. Only one cupful should be used to eight loaves of bread. Bread made with this yeast is delicious. Mrs. F. B., California.

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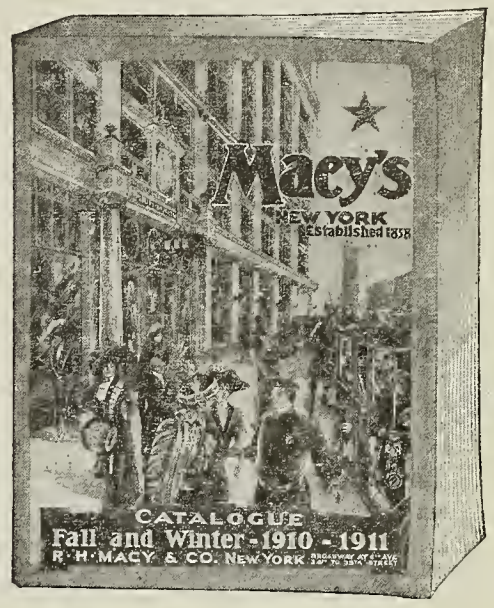

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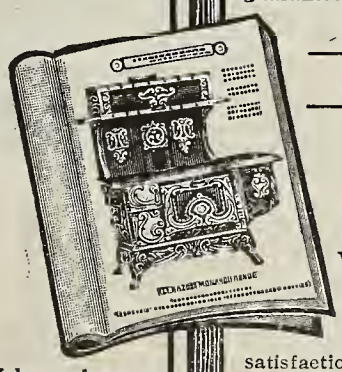

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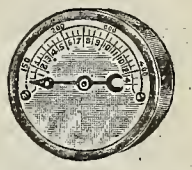

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The Healing of the Hills

A Two-Part Story—By Winifred Kirkland

Illustrated By Robert A. Graef

Part II.

"WHERE'D you like to go?" asked Roy.

"Somewhere where it's quiet," said the girl.

"Up Carle Hill, through the woods," responded Roy, having meant to go there from the first.

They turned out of the drowsing village, with its droning mill-race, panted through a burning space of dusty road, then reached the woods and went winding slowly about the hill. On the left tree branches climbed high against the hill slope, green with undergrowth. On the right they could look down upon other tree-tops below them, and through tall stems could see the blue of other hills across the valley. A thread of brook trickled by the roadside. The air was sweet with fern.

Roy, bowed forward, elbow on knee as he drove, watched Mary's face from under his lowered lashes, that scrutiny making subtle his long burlesque face. Mary's face was pure as a cameo, the cheeks grown faintly pink now. Her hair rippled and waved, and was arranged with a skill very unlike the careless sweep of Lidy's braids. Her hat, of a city fashion, was brown. Her short sleeves showed elbows dimpled like a child's. Around her throat ran a necklace of coral, red as a line of blood. Hers was a shop-girl smartness, redeemed by a grace inalienable by any vulgar association. Her lips were relaxed now, parted childishly.

The wood road was silent except for the monotonous beat of the mare's hoofs. At last, still watching Mary, Roy spoke. "You like it, don't you?"

The child-face turned toward him, radiant. "I love it!" she said.

"Thought you would," he commented happily.

"What's that?" cried the girl. "Something moved, up there by the stump."

"A chipmunk. Ain't you never seen one?"

"No."

"You wait a bit. Up here a piece further on, it's a great place for gray squirrels. Ever see 'em jump from one tree to 'nother?"

"No." Then she added, "I don't know much about the country."

"Ain't you never been in the country before?"

"Not country like this. To the seashore sometimes, but there were always so many people."

"Must seem kind o' queer to you, after being raised in New York."

"It seems beautiful," she said wistfully. "I wish I'd been raised here all my life, on these hills." Then dreamily beneath the spell of the woods, "Seems like I belonged here, sort of by rights!" Then again the tragic droop pulled at her little mouth.

"Then you don't think country folks are no good, after your city folks?" said Roy triumphantly, thinking of Lidy's accusation.

She shot him one little glance keen as a needle prick. "Oh, I guess country folks are all right," she said indifferently.

After that he found that she checked him if he made any reference to herself and so they drifted into safer chat, of blue glimpsing hills, of the green moss that powdered the northern tree trunks, of the chattering of chipmunks. Mary's eyes were shining as they got out to drink at a tiny spring. Roy scooped up a draft in hollowed palms and held it to her to drink, but the old shadow dropped on her face. "No," she said, "show me how to do it myself," and, kneeling, she plunged her little hands into the clear green depth.

The sun had sunk even on the hills when they turned homeward to Southam. It was twilight, but still clear as they drew into the valley. The wholesome air of the hills had changed, grown close, and they shivered sharply at a damp breath before they saw that already the river mist was rising, a long trail of white.

Mary was clearly anxious and worried. "Let me out here," she said, before they turned into the village. "I can go home alone. It is not a very long walk."

Roy stopped obediently, and then they both heard wheels coming toward them. Mary, half risen, was first to recognize the occupant of the other buggy, and she sat down again at once, saying, "No, drive me all the way home."

Roy was aware that the two girl-faces met squarely without smiling, as Lidy Clark passed them, driving her little nieces home to Anstover, two miles beyond Southam.

As the weeks passed Roy realized in the absence of all covert comment or open banter that Lidy Clark had told no one that she had seen him driving with Mary Pemberton.

The berry season lasted long that summer. The raspberries lingered until August, and the blackberries hung ripe long into that month. Other berry-pickers came and went, but Mary Pemberton picked steadily. Every Saturday night when Roy paid her, her little hand clutched the dollars hungrily. The hill air and sun in those brief weeks had transformed her, pulled her bent little back straight, touched her pallor to life. The pulsing of her blood astonished, frightened her. All alone in her berry row more than once she found that she had laughed out loud; she stopped then with sharp-drawn breath, not realizing that, bruised and broken as she was, she was only a child and that the warm green earth had taken her to her breast to heal. The city behind her and the city before her in the autumn was a black dream from which she breathed free for a little while.

Even the persistent dislike of the girls hardly hurt now. She watched how they hovered, romping, playing, chattering, always in Roy's path, and yet she, the one they despised, was the one he took driving on Sunday afternoons. Not that Mary wanted the girls or any one else to know that. After the first Sunday she had never allowed Roy to seek her at home, but at the mill below the village. "I often go down there," she had said, "to sit on the bank down below the elder bushes. You can't hear anything but the water down there. I used to sit and look down into it for hours." She said "used to" as if it had been in times long past, and indeed the thoughts with which she had looked into the swirling stream seemed long past, so sharp had come the cry within her for life, the life of sun and wind and growing things upon the hills.

She had come to trust the old trees of her hillside orchard, and the banner of blue spread between the nodding green of her berry row, but other trust was torn with throes of pain and doubt. Once when Roy had set her down just beyond the village and left her to walk home to the little brown house at the end of the street and to the little mean old man who waited there, he said suddenly, "Say, is he good to you?"

She turned about. "Oh, good enough, I guess," she answered; then she came back to the buggy, and with one little hand on the wheel she looked up at him, the clown turned knight. "Tell me," she said, "are men ever good to women?"

"Slowly her form took shape where the light from a mill window streamed across the night"

"I hope so," he said humbly, and then his eyes felt the smart of tears as he saw her running from him, a slim white thing beneath the twilight trees.

In that month Mary sometimes slept the merciful sleep of a child, and sometimes her nights were racked with sobbing.

In Roy's long shambling body the man-heart went singing as he drew nearer with reverent feet to that shy sweet soul he saw shining in Mary Pemberton's eyes when she turned them suddenly from the shadows of the woods through which he drove, into his.

Meanwhile the secret of their Sunday drives seemed in some strange way to be preserved, and also no one told Roy about Mary Pemberton, every one thinking that, of course, he knew. Only Lidy watched the two faces strangely, as if some wild thing out of a pagan wood should look with curious alien eyes on our cruel mortal facts of sin and shame and love.

The weeks slipped away, and the berries were over, and the berry-picking, but not the September Sundays. Then one day, for both of them, the dream broke.

Once a year, at the end of September, sleepy Southam wakes to gaiety. The mill dance is the institution of generations. Once a year the fat sacks are shuffled out of the great store-room on the second floor of the mill. The fiddles quaver above the monotone of the millrace, and the people come from all the country around for the dance in the old Southam mill. The older ones come early that they may watch who comes with whom, for the choice of companion for the mill dance has no casual significance.

Gossipping girls in knots about the post-office or the station wondered whom Roy Pratt was going to take to the mill dance, but days passed on and not to any one's knowledge had Roy asked any one. It was because he dared not. If Mary refused to go, it meant the end of the Sunday afternoons, and yet he dared not believe she would not refuse. From day to day he vacillated feverishly. Then one morning his resolution grew firm. He had been up early, and having turned his mare loose in the orchard, was sitting on the stone wall looking toward the valley veiled in pearly white. Slow and stately the September sun came rolling up, touching the mist, pricking and piercing it, at last sucking it clean up, leaving the valley—wooded bank and dotting farm-house and church steeples that pointed their way through the green, and the shining river—clear and clean to the view in flooding light. Watching with quiet drawn breath, Roy's purpose grew strong with hope.

The crisp, golden morning stood at nine when he found Mary. He had taken the cross-country path on foot, but within two miles of Southam with the best of luck he came upon her. At this spot there is a little ravine thick with chestnut trees. The highroad is not far off, but standing within the sloping hollow you can not see the passers-by, nor they you. Roy first spied Mary, a slim gray figure, on the outskirts of the chestnut grove. The wind caught the bough above her and sent the leaves swirling about her, the sun upon them so that they looked like a shower of gold against her gray dress. He came upon her so suddenly that she had no time to be frightened, it seemed so natural that her tall comrade of the hills should be stepping forth to greet her in the golden windy morning.

Roy did not know what else he said before, catching at a teasing twig above his head and looking down into her upturned face, he said, "Mary, I come to ask you to go to the mill dance with me, will you?" The words were breathless with intensity.

The sunlit eyes turned strange and solemn, gazing wide and frightened into his. Sun and wind upon the silent hillside swept from them all subterfuge of words.

"I want to," she answered, "but I mustn't."

The red surged to his cheek at her avowal—she wanted to!

"If you want to, you will," he cried. "I'll come for you at eight-thirty sharp next Saturday night. It's settled now—eight-thirty," he repeated, stupid with delight.

"I mustn't," she whispered, drawing back; he pressed nearer.

"Why mustn't you?" he demanded, smiling. "Who's to hinder?" Then the flooding words shook him. He caught her small fluttering hands, towering above her. "Mary, I love you. The mill dance ain't all I want. I want you should be my wife. I want you should marry me. Will you?" His blue eyes were burning.

"I mustn't," she whispered faintly, seeking to draw away her hands. At her movement he suddenly dropped them, his face turning gray.

"You mean I ain't good enough for you," he said. "I know I ain't. I couldn't help speaking out. I know how you feel. You're so good and fine, so different from us. I know I ain't in it with city folks. I'm kind of crazy, I guess, to think about it. I thought you liked the country so much that perhaps you could stand the hills—and me. I'd take care of you as good as any city feller. But I ain't good enough for you."

Mary was so pale that she sank down on the brown leaves. Suddenly crimson swept over her face, to her forehead, to her hair, and she bowed her head on her knee so that her words came muffled. Roy had tossed himself on the ground beside her.

"It's not that," she moaned, "it's—I'm not good enough for *you*."

"If that's all—" he laughed out.

"No," she lifted her head, white again, eyes wide with question. "Roy," she asked, "hasn't any one ever told you?"

"Told me what?"

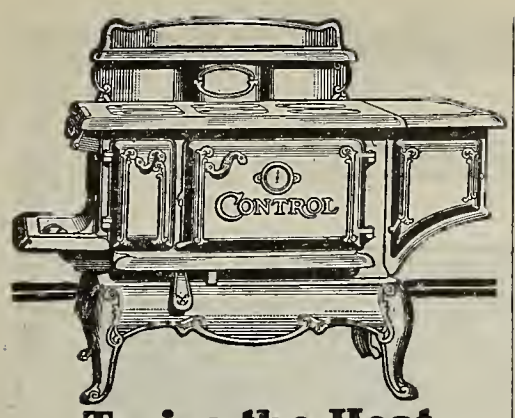
"Don't you know—about me?"

"I know you're the best woman I ever knew!"

She cried out sharply like a child beneath a blow. "I thought you knew! I thought you knew and came to see me just the same." Then suddenly she stiffened herself to marble, her hands about her knees, her face colorless to the lips. She looked at him full. "I'm bad!" she said.

But at the slow-growing horror in his face, she cried out again, "No, no, not so bad as that. It wasn't all my fault. I'm seventeen now. It happened last year. I wasn't very old. I didn't understand. I believed him. I didn't love him—I know now I didn't—but he was

[CONCLUDED ON PAGE 21]



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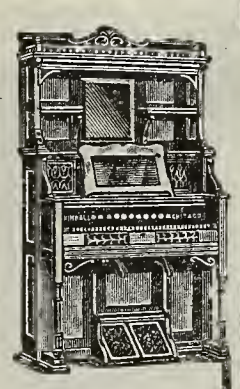

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WOMAN'S HOME COMPANION

Madison Square, New York City

The Healing of the Hills

[CONTINUED FROM PAGE 20]

good to me, and they weren't very good to me at home. Afterwards—I was so long getting over it—one night—mother found out before I could do it—but I'd bought the poison! Then she wrote to grandfather and asked him if I mightn't come here. He didn't want me, of course, but I've earned enough picking berries to pay my board. And you've been good to me. Nobody was ever so good to me! And I've gotten better. I wish I hadn't, because now I must go back!"

Still Roy sat motionless looking at her, so that she covered her eyes again, whispering, "You can't understand. You're good. It's easy to be good in the country."

Still he did not speak.

She turned from him, her face to the ground, a bruised child fallen on the drifted leaves, while the sun caught the gold of her blown hair. Only the wind rustling the tree-tops, only the thud of a chestnut-bur now and then broke the silence.

Suddenly the air was all clamorous with voices and laughing. Mary sprang up, was gone, gray and swift as a ghost, threading her way among the trees up the gully slope, while Roy, to make good her escape, charged down upon the new-comers still heard but unseen as they clambered up the steep incline from the roadway. Brandishing legs and arms, bellowing, Harlequin came down upon a dozen girls and Lidy, all armed with sticks and bags for chestnutting.

"Keep off! keep off!" he shouted. "No trespassing. Folks caught stealin' will be treated to the full penalty of the law!"

His sallies met with delighted applause. "Here's Roy! He'll shake for us."

Laughing, the dozen of them poured down into the ravine. Roy was his noisiest, his maddest. He beat the trees until the smaller branches crashed to the ground, and in and out among the brown tree boles he twisted and doubled, playing tag with the girls. Only Lidy could outstrip him, and she did, leading him farther and farther up the hillside and away. Well out of hearing of the rest, she turned about. "What's wrong, Roy?" she asked.

"How did you know?" he demanded.

"I'm no fool, Roy Pratt!"

Panting, flushed, she stood there, leaning against a brown trunk. Roy had never in his life seen Lidy so beautiful, her cool eyes facing his, her hair tumbled, standing there alone with him in the golden woods.

"I didn't know—about Mary," Roy blurted.

"Who told you?" cried Lidy fiercely.

"She did."

"She did?" Lidy's eyes grew deep with pity. "Poor thing! So she likes you—enough to tell you that!" Lidy spoke to herself.

"Lidy," he went on, "I don't know what's right to do. There's ma and sis—"

But at something in Lidy's eyes he stopped. Lidy's look was far away, a nymph's who had paused in the chase and was eager to be off. Slowly her gaze came back to Roy's, and in his eyes she saw something far, remote, yet terrifying.

"There's mother and sis—" Roy said in helpless trouble at his new tragedy.

Lidy's voice rang, "There's you and Mary," she cried, but was it the pitying woman within her that spoke or the gipsy boy jealous of freedom? "There's you and Mary, and that's all the people I can see in this business!" Then abruptly sped away from him, down the hill to the others.

It was Tuesday morning when Roy found Mary in the chestnut woods. All that week he spent at home. In that week Roy Pratt ceased to be a boy. It was a man, strong and quiet, who knocked at Joe Stephens' door at half-past nine on Saturday night.

The old man shivered, peering out above a lighted candle. "Mary's gone out," he said before Roy spoke. "She waited around a good bit, waiting for you, I s'pose."

"Susie slipped a shoe," explained Roy, "'bout three miles this side of home, and I took her back and took out 'Tom, and I guess I must 'a' lost an hour p'r'aps."

"Well, she waited a good while," said the old man, then went on complainingly. "Mary's been actin' kind o' queer this week. Guess p'r'aps she feels pouty because she's got to go back to the city. She's gone out somewheres. I don't know where."

But Roy had turned from the door with flying steps. He knew where Mary had gone.

The fog, thin and easily seen through, yet distorting lights and shadows, overspread the road as Roy ran on along the street toward the mill. The fiddles were squeaking merrily. The windows of the mill were ruddy squares against which the heads and shoulders of the dancers whirled around and around dizzily. Their voices sounded out into the misty night, and under all the millrace roared steadily and low.

"Below the elder bushes, below the elder bushes," the words kept sounding in Roy's head. He hurried on, peering into the fog along the bank. At his right the mill-stream seethed. Surefooted he made his way to the little bank below the elder bushes. Would he be in time?

In white, like a part of the mist, slowly her form took shape where the light from a mill window streamed across the night. She stood at the edge of the millrace, poised. His arms closed about her. Her words were hardly louder than a breath, "I thought you weren't coming!"

So very small and slight she seemed in his big grasp, the little broken child of the city. She was not yet quite herself, he found, for she murmured dreamily, "Up there among the berries, up there among the berries, it's easy to be good. But not in the city, so I'm going to stay here—here!" And held as she was by his arms, she moved again toward the water.

"No," he said softly, "no, no," and then in his great love and pity he strove to soothe her with homely words as if she had been really the mere spent child she seemed. "Up there among the berries," he repeated, "you're a-going to forget the city—that's just something you dreamed about—up there among the berries—you and me—we're going to start a new row."

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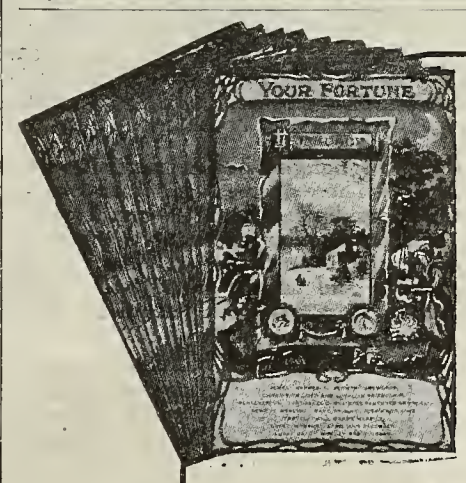

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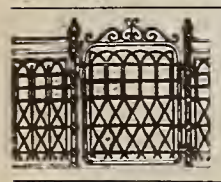

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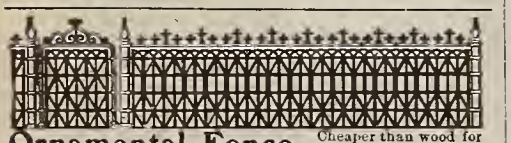

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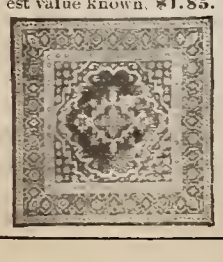

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Oddities From California

A QUAINT hanging basket made of what is called the "cypress knee." These "knees" grow on cypress trees and are somewhat like knobby root sprouts—slender and rounded at the upper end, and broadening out near the ground. The durability of the wood makes the "knee" an ideal hanging basket, and one in which ferns and trailing plants will flourish from year to year. The plants do not dry out so quickly in a basket of this kind.

THE "cypress knees," of which these hanging baskets are made, are cut off the tree near the earth and when sawed smoothly across, turned upside down and the soft pith hollowed out, there is a generous cavity for holding the soil. They make clean hanging baskets for the living-room, as their drainage does not damage rugs nor curtains. It is not necessary to have even a small drainage hole. The surplus moisture will drain down into the porous inner wood without rotting it. So highly is this species of timber esteemed for its durability, that the Athenians in order to preserve the remains of their heroes, buried them in coffins of cypress; and chests containing Egyptian mummies are usually of the same wood.

THIS picture shows the world's record black sea bass, caught on rod and reel, by L. G. Murphy at Catalina Island, California, after a fight of forty-three minutes. It weighed, when brought to the Avalon pier, four hundred and thirty-six pounds. Mr. Murphy, the lucky angler, is shown in the photograph, holding the hickory reel on which the monster was caught. Notice the difference in size between this sea bass and a man of average height.

THE above photograph shows a pair of lion cubs, male and female, and their foster-mother, an Irish setter. The cubs were born to a lioness in captivity at the zoo in Los Angeles, California. A previous pair of cubs had been killed by the mother, and a few days after the birth of the pair here shown they were taken from her and given to the dog. The foster-mother willingly took up the task assigned her, nursing the cubs until they were considerably larger than she. The picture shows them when they were less than three months old. To-day they are full grown and are confined in a cage close to that of their real mother. The foster-mother no longer recognizes them, and it is more than likely that the young lions do not recognize her.

OF COURSE you have seen big pumpkins, but have you ever dreamed of such a big one as is shown in the picture to the left of the page? It is a real pumpkin, though, and was grown out in California. It is big enough for a little girl to stand in. Doesn't it remind you of the old Mother Goose rhyme that begins something like this: "Peter, Peter, Pumpkin Eater, had a wife and couldn't keep her?"

Perhaps the oddest picture on this page is the one on the right. It is not a bird, as one might think, but a gigantic sugar-beet, probably the largest one ever grown. By giving it eyes and decorating with a tie, it has been converted into a fairly close resemblance of an owl.

THE pumpkin here pictured is perhaps the largest one ever grown. It comes from California and weighs two hundred and thirty pounds. Is it not an odd play house for a little girl?

THIS may look like an owl, but it is nothing but a gigantic sugar-beet, which was grown in southern California. It is three feet four inches long and weighs nearly sixty pounds.

New Fall Fashions

Attractive Clothes for Many Occasions

Designed by Miss Gould

THE woman who can have just as many new clothes as she wants at the beginning of each season is surely a fortunate woman. She is, however, the exception rather than the rule. Most women have to study economy in the planning of their clothes and to them the separate waist is indeed a very great blessing.

Two smart-looking, practical waists for fall wear are illustrated on this page. The one shown in pattern No. 1618 shows the fashionable square collar. This waist buttons through a hem in front. The collar, the belt and the cuffs should be made of a contrasting material from the blouse. For instance, to wear with a dark blue serge skirt, this waist might be made of dark blue taffeta, with the collar, belt and cuffs of blue foulard perhaps in a lighter shade with a dark dot or of a decidedly contrasting foulard.

No. 1618—Shirt-Waist With Square Collar

Pattern cut for 32, 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, three and seven eighths yards of twenty-four-inch material, or two and one fourth yards of thirty-six-inch material

The model is also a very good one for developing in flannel, especially now that embroidered flannel is so very much the fashion.

The waist illustrated in pattern No. 1620 is a plain tailor-made waist. Nothing could be more attractive for this waist than embroidered flannel.

Or, if embroidered flannel is too expensive, there are any number of very dainty flannels to be seen this fall which show printed designs in stripes, dots or flower effects.

The most attractive of these have the background in white and the design in color. Have the tie and belt match the waist in color. This waist would also be attractive made of one of the inexpensive foulards, one in which the design is simply a dot, a ring or a stripe.

A SENSIBLE school coat for your little daughter is illustrated on this page in pattern No. 1581. Such a coat should be made of either cheviot or serge with fur or fine soft leather for the turn-down collar and cuffs.

In planning your small daughter's school clothes, be sure to include a number of aprons. Now that the ginghams come in such attractive colors and pretty designs, a school apron or two of gingham will be found very useful.

However, many mothers will always prefer for their small daughter white aprons. Some of the white dimities nowadays are charmingly dainty and will make up into the prettiest sort of an apron.

No. 1581—Single-Breasted Coat With Cape Collar

Pattern cut for 4, 6, 8 and 10 year sizes. Material required for medium size, four and one half yards of twenty-seven-inch material, with one half yard of suede for trimming

ONE of the very important dress accessories this autumn is the belt. This is so because Fashion just at present likes to emphasize the normal waist, notwithstanding the fact that many of the newest French gowns show the waist-line raised a trifle. Patent-leather belts are very good style. They not only come in black nowadays, but in almost any pretty color. Belts made of a scrap of a Paisley shawl are fashionable, especially when bound with black patent leather.

The wide suede belt forming really a girdle is extremely modish. It is generally finished with a deep buckle covered with the suede and is much the best style when it is black.

No. 1578—Apron With Kimono Sleeves

Pattern cut for 4, 6 and 8 year sizes. Quantity of material required for medium size, or 6 years, three yards of twenty-four-inch material, or two yards of thirty-six-inch material

The new fall and winter catalogue of Madison Square patterns is just out. Its price is but four cents. It is invaluable to the home dressmaker. Order from the Pattern Department, Farm and Fireside, 11 East 24th Street, New York City.

No. 1590
No. 1591

No. 1504
No. 1505

No. 1590—Plaited Tailored Shirt-Waist

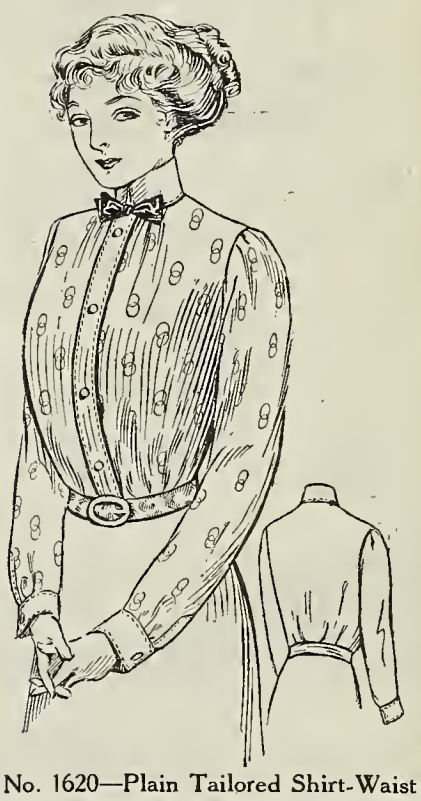
Pattern cut for 34, 36, 38, 40 and 42 inch bust measures. Quantity of material required for medium size, or 38 inch bust, three and seven eighths yards of twenty-four-inch material, or two and one fourth yards of thirty-six-inch material

No. 1591—Skirt With Simulated Side Drapery

Pattern cut for 24, 26, 28, 30 and 32 inch waist measures. Length of skirt all around, 40 inches. Quantity of material required for medium size, eight and one fourth yards of twenty-four-inch material, or five and seven eighths yards of thirty-six-inch material

PARIS fashions, of course, are always interesting, but to the average American woman they are not always practical. However, the fact that Paris keeps right on advocating the veiled idea is a fact of much interest to the woman who is planning her winter clothes.

For remodeling purposes veiled styles are extremely helpful. For instance, if you happen to have in your wardrobe a silk dress, one which you have worn year after year and which you have remodeled many times, you can transform it into an extremely modish dress by veiling it with silk voile, marquisette or chiffon cloth. Tunics of all sorts are fashionable and they are particularly pretty if trimmed with ribbon velvet.



No. 1620—Plain Tailored Shirt-Waist

Cut for 34, 36, 38, 40, 42 and 44 inch bust measures. Material for medium size, four and one eighth yards of twenty-four-inch material, or two and one half yards of thirty-six-inch material. This pattern provides for the linen collar

Many of the new costume waists are of figured silk or soft brocade, veiled with marquisette or chiffon. These waists, to be very fashionable, should have the veiling in the same color as the skirt with which the waist is worn.

Silk, in a Paisley or plaid design, for instance, would look very attractive veiled with gray chiffon and worn with a coat-and-skirt suit of gray cheviot.

In making the new costume waists to wear with a tailored suit a little touch of cream white is often introduced in the yoke, making the waist more becoming.

Paris is advocating much fur for trimming this year. This may seem an extravagant fashion, but, on the other hand, many women have bits of fur which they have discarded, which perhaps they can now use as a modish touch to a gown. Small bits of fur are introduced on otherwise rather plain trimming-bands.

No. 1504—Gathered Waist With Elbow Sleeves

Pattern cut for 32, 34, 36 and 38 inch bust measures. Material required for medium size, three and three fourths yards of twenty-two-inch material, or two yards of thirty-six-inch material, with three eighths of a yard of net for yoke

No. 1505—Skirt With Apron Drapery

Pattern cut for 22, 24, 26 and 28 inch waist measures. Length of skirt all around, 42 inches. Quantity of material required for medium size, or 26 inch waist, eleven yards of twenty-two-inch material, or seven and one half yards of thirty-six-inch material

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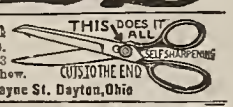

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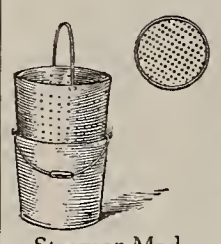
The Housewife's Club

EDITOR'S NOTE—Most every woman has originated some sort of a device or convenience to make part of her housework easier and less burdensome, and to all who have, we would ask that you write and tell us about it. Aside from making a little pin-money for yourself, you will be helping others, and this is what "The Housewife's Club" is for. We will give $2.00 for the best description and rough sketch of an original home-made household convenience or labor-saving device, and $1.00 for the next best, or any that can be used.

We will also give 25 cents each for good kitchen hints and suggestions, also good tested recipes that can be used. All copy must be in by the tenth of November. Contributions must be written in ink, on one side of the paper, and must contain not more than 250 words. We would suggest that contributors retain copies of their manuscripts, as no contribution will be returned. Address "The Housewife's Club," care of Farm and Fireside, Springfield, Ohio.

A Good Steamer



Steamer Made From Old Stewpan

Here is a good way to utilize a stewpan that leaks. I made mine into a steamer by punching the sides and bottom full of holes. This may easily be done with a nail and hammer. By filling a vessel with hot water and putting the stewpan down in it, you will have a very good steamer for puddings or tough chickens. In addition to this it also makes a good drainer.

This original household invention has proved most valuable to me.

Miss M. F. G. K., Kansas.

When the Hot-Water Bottle Leaks

Small holes in rubber gloves and hot-water bottles may easily be mended by cutting a small patch of tailors' mending tissue and applying it to the rubber. Moisten with common chloroform, lay on a second patch and moisten again. Use four or five pieces this way. The chloroform will dissolve the tissue and when it evaporates a firm patch adheres to the rubber. I learned this from a trained nurse. Mrs. L. W., Montana.

Hop-Yeast

Boil one small handful (about one half cupful) of hops in a quart of water for five or ten minutes. Also boil four medium-sized potatoes in one quart of water until thoroughly cooked. Put potatoes in crock and mash fine. Then add the water in which they were boiled and strain in the hop-water. To this mixture add one tablespoonful of salt, one half cupful of sugar and one half teacupful of flour. Thicken with meal and let cool. Then add one half cupful of yeast soaked in warm water. Let stand in warm (not hot) place until light. When light stir down and let rise again. Stir down the second time and add more meal until stiff. Put out to dry on cloth either in cakes or lumps. This is an old family recipe and has been well tried and always proved successful. One half cupful of this yeast (when dry) will make six or eight large loaves of bread.

Mrs. A. B. A., Illinois.

Good Butter

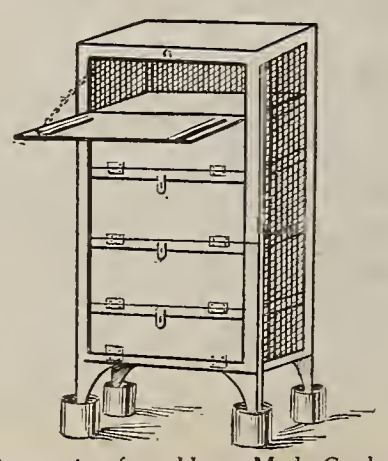
I find that if butter is worked once after churning and allowed to stand two or three hours, and then worked again, it will have a much nicer flavor than when worked only once. It will not be streaky.

G. M., Michigan.

An Ant-Proof Cupboard

Below is an illustration of a cupboard that my husband made for me to keep at the top of my cellar stairway. It is rat, fly and ant proof, and is made of pine board two inches wide, one inch thick and five feet long. It is one and one half feet deep and two feet wide. The doors are made of one-half-inch boards with cleats to keep them from warping, and are hinged as shown in the illustration, with a chain attached to allow the door to drop even with the shelf. The sides and back of the cupboard are covered with fly screen, allowing the air to circulate around the floor, and at the same time keeping out rats and mice.

The legs are ten inches long and are set in cans filled with water to keep out ants. Mrs. J. E. J., Massachusetts.



A Suggestion for a Home-Made Cupboard

To Hang a Skirt Evenly

An easy way to gage the length of a skirt is to lay on the floor a book, the thickness of which is the distance you wish your skirt from the floor. Put on the skirt, adjust it firmly at the waist and stand so that the material touches or lies over on the book. Then turn slowly around while a second person turns up the hem or cuts it off as may be desired, at the line indicated by the edge of the book. You will find that your skirt will be perfectly even. F. M. S., Illinois.

Lemon Cream Pie

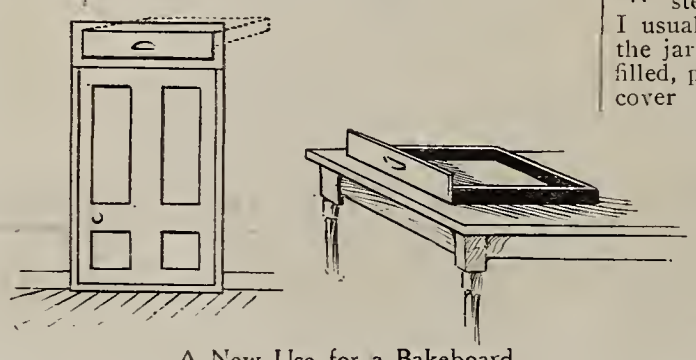
One teacupful of sugar, one tablespoonful of butter, one egg, the juice and grated rind of one lemon, one teacupful of boiling water, one tablespoonful of corn-starch or two tablespoonfuls of flour dissolved in cold water.

Stir the corn-starch into the boiling water, add the butter and sugar, and when cold add the lemon-juice and the yolk of the egg. Bake in one crust.

Meringue—Whites of two eggs and six tablespoonfuls of sugar. This makes a delicious pie. Mrs. M. J. B., Iowa.

Combination Bakeboard and Shelf

What to do with the bakeboard when not in use is a problem which I have solved in a very satisfactory way, for mine is a shelf when not a bakeboard. I had it made like a very shallow drainer twenty inches by thirty inches and a two-inch strip all around the edge. In the top of the cupboard extending to the floor I have an opening fitted with strips, on which the drawer slides. When pulled halfway out it makes a most convenient shelf; when pulled clear out and inverted on my kitchen table it is a bakeboard. The cleat extending all the way around the edge keeps everything off the table and floor. A handle on the front makes it easy to put the drawer in and take it out.



A New Use for a Bakeboard

Mrs. J. B., New York.

Pumpkin-Pie

One large cupful of strained pumpkin, one large egg, two thirds of a cupful of sugar, one large cupful of milk, one level teaspoonful of flour, one teaspoonful of cinnamon, one half teaspoonful of ginger. Stir the flour, sugar and spices into the cooked and strained pumpkin, then add eggs and milk, fill crusts and bake slowly.

I always pare the sweet pie-pumpkins, stirring and allowing it to simmer on the back of the stove until fine and thick. The pumpkins make delicious pies.

Mrs. L. V. M., New York.

When Peeling Fruit

Every woman who peels peaches, pears, etc., for canning or preserving soon finds that the knife used for paring the fruit leaves a sore place on the index finger. This can be obviated by placing a small piece of adhesive plaster over the second joint of the index finger. Try this the next time you are peeling fruit, and you can pare all day without suffering any inconvenience. E. T. K., Texas.

For Scalds and Burns

Take twenty drops of carbolic acid to one tablespoonful of olive-oil. It will relieve immediately and speedily heal the wound. It is also excellent to ward off blood poisoning. I have used this preparation often in my home with splendid results. Mrs. L. C. S., Kansas.

Peanut-Butter

Shell and skin freshly roasted peanuts, grind to a powder, mix to a smooth paste with one half as much butter as peanuts. C. M. B., Tennessee.

Hints for the Housewife

It sometimes happens that no matter how long you leave a pie in the oven it will not brown. When about ready to put into the oven, put a tablespoonful of sweet milk on the top crust and spread. It will have a brown flaky appearance when ready to come from the oven.

When your clocks become sticky and refuse to run, saturate a small piece of cotton batting in kerosene and place in the bottom of the clock. After two months remove and place a new piece there. The old one will be all gummed up, but the works of the clock will be perfectly clean. As the oil evaporates it cleanses the works.

The water in which potatoes have been boiled is excellent for cleansing silverware, as it produces the luster of expensive polishes. It is also a good liquid for cleansing silk. M. B. G., Wisconsin.

When a musty odor is perceptible in a room, place some charcoal in a dish or hang it up in a little bag of net or cheesecloth. This will absorb the odors and thus purify the air.

Mrs. P. P. E., Oklahoma.

In lieu of an iron pot-scraper, a clothespin answers very well in cleaning cooking-utensils.

In making a batter pour the liquid into flour and a smoother batter is made.

F. M. S., Illinois.

To Can Grapes

Wash the grapes and pick them off the stems and drop them into glass jars. I usually fix six quarts at a time. Heat the jars, as the grapes will shrink. When filled, pour boiling water over the grapes, cover lightly with lids, let stand three minutes; then pour off the water and pour on more boiling water; let this stand three minutes; again pour off. Have ready a rich syrup and pour this over grapes and seal. When they begin to cool, turn jars upside down so the syrup will go all through the grapes as they cool. Set away in a dark place. When opened, the grapes taste very much like fresh grapes, while the juice is delicious. White grapes are especially nice canned in this way. Mrs. N. E. R., Texas.

To Can Beef

Cut it in small pieces. Season to taste and pack in glass jars. Do not pack jars too tight. Cover lightly, using new tops and rubbers, and set the jars in a boiler in which has been placed a board or some straw to keep the jars from touching the bottom. Fill the boiler with cold water, bring the water to a boil and let boil three hours. Allow the jars to stay in the boiler until the water cools, then tighten the rubbers and keep the cans in a cool, dark place until wanted.

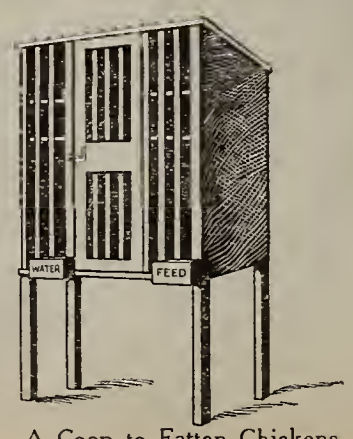
E. C. H., Michigan.

Fattening Coop

This fattening coop can be made any size desired. It has a slat front, with the slats far enough apart to allow the chickens to eat and drink out of the little troughs. The floor is also made of slats, which makes the coop sanitary. The little troughs are made with lids, thus protecting the food and water from dirt and dust. The roof is sloping, to allow the water to run off of it in rainy weather.

A small box of gravel or oyster-shell should be kept in the coop. I find this an excellent way to fatten chickens.

The coop may also be used as a house for sick chickens to keep them away from your flock. Mrs. C. W. H., Maryland.



A Coop to Fatten Chickens

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OUR YOUNG FOLKS' DEPARTMENT

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Frisky and the Sheriff

By Clarence Hawks

ABOUT two miles from our village upon a partially wooded side-hill there is a large sheep pasture. The hillside is always green and sunny.

I can recall no lovelier picture than that of the peacefully grazing flock upon the hillside, their white fleecy forms clearly outlined against the green of the pastureland. They are as white and soft looking as fleecy clouds in a summer sky.

In the springtime there are innumerable tiny forms skipping about among the full-grown sheep, and the merry wind in its race down through the pasture brings to the ears of the passer-by the plaintive bleats of the lambs.

Master Frisky was always interested in this flock of sheep and I do not think we ever passed the pasture without his noticing them.

If he was following the team, he would jump upon the stone wall that he might get a better view. But never did he offer to chase them or in any way molest them.

Now there has always been war between the owners of dogs and the owners of sheep and cattle, especially the latter, all because some bad dogs will kill sheep when they get a chance.

That is why we have to pay a tax upon our dogs. This tax money is used to pay damages to farmers for sheep that are killed during the year. If there were no bad dogs and no dishonest farmers, there would be no need of a dog tax any more than there is for a cat tax.

But because some bad dogs do kill sheep, and some farmers who are dog-haters make out there has been much more damage done than is really the case, all dog-owners have to suffer.

But I had never worried any about Master Frisky harming any one's sheep. He was so good natured that I knew he would not even kill a grasshopper. This being the case you can imagine my astonishment and horror when one spring morning the sheriff, with a gun leaning against the seat of the buggy, drove into the yard. His first words were: "Bring out your dog. I have got to shoot him. He has been killing sheep."

"Killing sheep!" I gasped. "You don't expect me to believe any such nonsense as that, do you? Why, Master Frisky wouldn't kill a fly."

"Well, you are mightily mistaken for once," replied the sheriff pompously. "He has not only been killing sheep, but we can prove it. Old Solomon Weatherby saw him and Brindle Johnson racing the sheep into the woods like mad, and Brindle can't be found, but your dog is right here in the shed. I saw him when I drove in."

"Solomon Weatherby is a dog-hater," I said, "and he hates me as well, and would be glad enough to get me into trouble like this. There isn't a word of truth in it."

"It is as true as gospel, and there was also another witness," retorted the sheriff. "Solomon's hired man was with him, and he says it is true. Now, if he is innocent, perhaps you can tell me where that dog Frisky was yesterday afternoon at about four o'clock."

A fear clutched my heart when I remembered that Master Frisky had been gone all the afternoon and that he had returned late covered with dust and seemingly much tired. There had also been a few drops of dried blood upon the end of his nose, but I thought nothing of it at the time, thinking that he had scratched himself upon a bramble and made his nose bleed.

I was very careful to say nothing of these fears to the sheriff. "I don't know just where he was," I replied after a minute's thought, "but I am sure that he was not killing sheep. Frisky is not a cruel dog."

"Well, you will have to prove that he was not in the pasture at four o'clock, or I shall have to shoot him. I am sorry, but the law is the law, and it must be obeyed."

"Frisky," I said, "come here."

My dog friend, and he now seemed doubly dear with this danger hanging over him, came trotting from the wood-shed and, standing upon his hind legs, put his forepaws in my hands. He did not usually do this, but he knew that I was greatly troubled about something and wished to sympathize with me.

"Master Frisky," I said, looking down upon him sternly, "did you kill any of Deacon Perkins' sheep, the sheep on the hillside? Did you kill any of them?"

For answer my friend looked wonderingly up at me with his big brown eyes, usually all sunlight and love, but now filled with trouble. He wagged his tail doubtfully as though he did not understand my stern voice, but finally concluded it was a joke, as I often joked with him. For he barked three or four times. A full-throated, glad, joyous bark in which there was no fear.

"I have got the paper right here in my pocket to take him'"

I was convinced that he had not killed any sheep. I had known all the time that it was not true, but how could I convince the sheriff?

Then I noticed something white sticking from between the collie's teeth and stooped absentmindedly and picked it out.

The sheriff laughed, a laugh full of triumph and menace. A laugh that filled my heart with fear and rage.

"Wool," he said derisively. "You picked it out of his jaws with your own hands. Now perhaps you will believe that he is a sheep-killer."

In a second the truth of his assertion flashed over me, leaving me gasping and speechless, with a great lump in my throat and a pain like a knife-thrust in my heart.

Master Frisky saw my trouble and whined pitifully, licking my hands frantically.

"He knows he is guilty," cried the sheriff scornfully. "Don't you hear him begging for mercy? He knows what we do to sheep-killers as well as I do.

"Now let's not have any more fuss about this matter. You have seen yourself that he is guilty, and if you don't want to see him shot, I will take him home with me and you will not even hear the gun."

"You sha'n't have him, law or no law," I replied hotly, reaching down and gathering my pet in my arms. "You won't have him until a thorough investigation has been made and I have turned every stone to find out who is the guilty party."

The sheriff laughed. "You have proved him guilty yourself, and there is nothing more to say about it. He is as guilty as Brindle Johnson or any other sheep-killer. I thought I might have trouble with you, knowing how much you set by your dog, so I have got the paper right here in my pocket to take him whether you want me to or not."

It was a dastardly scheme to rob me of my dog. I saw it all now, but what could I do? As the sheriff had said, I could not resist the law. What could I do? He was as innocent of the sheep-killing as I was. I felt sure of that deep down in my heart, but the evidence was all against me. Despair clutched me. I wavered. What should I do? Was it best after all to give up my friend without a struggle?

The sheriff interpreted my silence as a sign of yielding, for he got down from the wagon and seized Master Frisky by the collar.

"Stop," I cried. "What is that?" A man was running at the top of his speed toward us across lots. He was waving his arms frantically and shouting, but we could not hear what he was saying. I did not expect any help from the stranger, but sought for any diversion from the terrible business in hand.

As soon as he came within hearing distance I made out the words:

"Don't shoot that dog. He didn't do it." It was Mike Maloney, the same kind-hearted Irishman who had shot Master Frisky by mistake a few years before, thinking him a fox. Surely if he could do Master Frisky a good turn now, he would. My heart beat wildly with hope.

"He didn't do it, at all. He didn't do it at all, at all," panted Mike as soon as he could get his breath after his long, hard run.

"I just hear out to the deacon's that you suspicioned him and I ran every step of the way to save him. I nearly killed him once, but I can pay him all back now, and a happy man I am.

"Mr. Sheriff, your honor, it was this way. I was chopping wood for the deacon on the side of the mountain and I see the whole performance.

"Brindle Johnson came into the pasture first and he began running the sheep up and down like mad. I was so far away that I could not stop him, and I didn't think he would kill any, but soon I noticed that he had pulled one down. But he didn't stop long with it, but was after another.

"He had just killed it and was after the third, when Master Frisky came over the fence like a red streak and, like the brave dog he is, he grabbed Brindle Johnson by the throat and began shaking him, and the two rolled over and over and finally went into the woods and out of sight, fighting like two tom-cats. Brindle Johnson was after the sheep to kill them, and Master Frisky was after him to stop him."

"But we found wool in his jaws," persisted the sheriff doggedly.

"Sure, and that is easily explained," returned Mike. "He got it in fighting with Brindle Johnson. I just discovered Brindle as dead as a stone, a-lyin' in the woods where Master Frisky finished him, and his jaws were just sticking full of wool. This dog got the wool in his jaws when he clinched with that mean cur. He is the finest dog in the world, he is, and it's meself that is glad this day I came in time. I nearly killed him with me carelessness a time back, but I guess we are even now. Hey, my fine fellow?"

Mike grabbed him up in his arms and danced frantically about the yard, while Master Frisky licked his face affectionately.

I looked on delightedly, but the sheriff was quite disgusted with the turn of affairs. "Well," he said in his surliest manner, "I guess that I shall have to let him off this time, but if I ever see him in a sheep pasture myself, I will send a bullet after him without waiting for any inquiry."

The Letter-Box

DEAR COUSIN SALLY:—

I am a city girl thirteen years old. I go to school and am in the seventh grade. Perhaps you and the cousins have read in history (during the period of the Revolutionary War) of the Wyoming Massacre. Well, there is a monument marking the place where this battle was fought. From our windows and doors at home and at school we may look upon this monument. It is between forty and fifty feet in height. On the third of July of each year a service is held on the grounds in memory of this dreadful battle.

I wish some of the cousins would write to me, especially those who live in or around Wilkes-Barre. Pennsylvania. Your cousin,

ELIZABETH T. WILSON,
14 North Main Street,
Plains, Pennsylvania.

DEAR COUSIN SALLY:—

It has been a good while since I wrote to you. I have a hen and twelve chickens, and we have three little pet chickens. Mama and I found a quail's nest with fourteen eggs in it. Six of them hatched and we kept three of the little birds for a long time, then they died. They were so cute, but seemed very wild. They ran with our pet chickens, and the chickens started to get wild, too. Mama killed a large copperhead snake in our grove the other day.

I have the dearest pony. When I say, "How do you do," he lifts up his right foot for me to shake. I would love to exchange cards with some of the cousins.

Your little friend,

STELLA THACKER.
Bethel, Ohio.

Prize Contest

CHRISTMAS GIFTS—For the best home-made Christmas gift or sketch of a Christmas gift, with short, clear description for making, we will give prizes of post-card albums, books, paints and colored crayons. Write in ink on one side of the paper only and give name, age and address. The contest closes November 3d and is open to all boy and girl readers seventeen years of age and under. Remember, the contest is for the boys as well as for the girls. Address Cousin Sally, FARM AND FIRESIDE, 11 East 24th Street, New York City. If you join the club at the same time you enter the contest, write your name, age and address on a separate sheet of paper. Club buttons are five cents each.

Unearth the Hidden Treasures on YOUR Farm!

Farm and Fireside's Great New Book Tells How to Sell 267 Farm By-Products

There is nearly as much money in the products you overlook on your farm as there is in all the hogs, cattle, sheep, grain, fruit and poultry you are now selling! These words tell the brief story of the great discovery that FARM AND FIRESIDE has made, perhaps, the most startling and valuable discovery in all the history of farming.

In factories **nothing goes to waste.** Every possible waste product becomes a by-product and is sold and turned into money. In thousands of factories the by-products double and treble the profits.

Saw mills sell their sawdust; shoe factories sell their leather scraps. The Beef Trust makes more from its by-products (bones, scraps, hoofs, horns, hair, etc.) than it does from the meat itself. It makes big profits on tankage, bone meal, blood meal, etc. It sells everything that belongs to a hog but the grunt. The Standard Oil Company gets nearly fifty by-products from petroleum, and it is these, far more than the oil itself, that have piled up Rockefeller's huge mountains of dollars.

Farmers know what by-products are. Manure is a by-product. So is straw. So is skimmed milk. These are not wasted, because the farmer himself can use them. But on every farm there are scores and scores of other immensely valuable by-products that rot and waste each year—things of no use to the farmer, but which millions of people in cities stand waiting to pay for with CASH.

How to Market

How to Bring Buyers to Time
How to Take Advantage of the Market
How to Really GET What You Earn

Farm and Fireside is the first farm paper to help its readers get better prices for their products. For years **Farm and Fireside** and other farm papers as well, have printed articles on how to increase and improve the yield of the farm. But until now, farm papers have paid but little attention to the **business** and **selling** of the farmer's work, which is, of course, just as important as raising good crops. The farmers who have big bank accounts and handsome houses are those who know **how to sell** and how to handle not only their **products** but their **finances** as well. This is the side of farming that **Farm and Fireside** is going to tell about as no farm paper has ever done before.

The pages in **Farm and Fireside** devoted to the scientific marketing of crops will be the most valuable pages in any farm paper in the country. These pages will tell our readers where to market their staple crops to best advantage, how to market them in order to get the highest prices. Every farmer who reads **Farm and Fireside** during the next year will have a great advantage over every other farmer in the country.

Among the marketing topics that will shortly appear in **Farm and Fireside** are the following: "How One Man Beat The Hog Market," "When To Sell Wheat," "Forcing Milk Buyers To The Limit." These are a few of the revelations on selling that **Farm and Fireside** will give its readers.

Bureau of Free Information

Every reader of **Farm and Fireside** is invited to make use of our Bureau of Free Information. **Farm and Fireside** maintains a special staff of expert men to answer any and all questions on farming. You are expected to consult these men by letter as often as you please. This service is absolutely and entirely without cost. Any question on farming about which you want information will be answered by letter at once by an expert.

During the coming year, Editor Quick's editorials will continue to inspire and help **Farm and Fireside** readers. **Farm and Fireside** will maintain during the year, as in the past, its Farmers' Lobby at Washington, which is considered among agricultural experts far and wide to be the most helpful departments to farmers in any farm paper in the country. **Farm and Fireside** will give its readers the very best information on all branches of farming, and, in addition, will furnish a wealth of stories and entertainments for the whole family, including departments about Cooking, Dressmaking and Care of the Home.

Every **Farm and Fireside** reader who sends a subscription within the **next 30 days** will receive **"FARM BY-PRODUCT" without cost.**

Every Farm and Fireside Reader Can Get the Book Without Cost

Farm and Fireside has proved conclusively that **millions upon millions** of dollars are annually lost simply because farmers have not yet learned the lesson so long ago learned by factories: **Avoid waste—turn every ounce of material into cash.** In other words, **utilize the by-products.** This is no dreamer's **"theory."** There is no **guesswork** about this. The whole thing is a dead-open-and-shut **FACT**—these nuggets of hidden wealth that the busy farmer has overlooked.

How Farm and Fireside Made the Great Discovery

Early in the spring, **Farm and Fireside's** editor, Herbert Quick, made a tour of inspection of many farms. Editor Quick found that most of the farms he saw were well cultivated, well stocked and prosperous. But not one farmer was utilizing the by-products which Editor Quick found in large quantities on every one of these farms. Not one farmer had made an expert study of **how to market his crops** for the most money.

Editor Quick arranged with forty-one different men, in all parts of the country, to find out all that they could about the various salable things that were going to waste on farms. These forty-one men were all practical farmers or prominent **Farm and Fireside** contributors. Editor Quick told them to hunt up all the **actual cases** in which a farm family was making a **paying success** of marketing any by-product. He warned them, mind you, to find not theories, but facts—actual, practical cases of where farm waste could be turned into good, hard **cash.**

These men have spent months in this search, and they have discovered **267 different by-products.** Think of it! 267 profitable farm products that most **Farm and Fireside** readers to-day actually allow to go to waste! 267 products which **Farm and Fireside** families can turn from waste into profit! The chief of these investigating experts declares: "There are enough neglected products on the average American farm to give a good bank account!"

Wide Variety of By-Products

These overlooked products, which are known as "By-Products," are not only numerous, but they are present on every farm in such wide varieties as to demand the attention of every man, woman, boy and girl who lives on a farm. Every **Farm and Fireside** family should at once begin to market its by-products. For by-products are the best **profit payers** of all, and can easily be made ready for selling.

The Wonderful Book—"FARM BY-PRODUCTS"

Now, when the editors of **Farm and Fireside** received the reports of all these different practical men and put all this mass of information together, they realized that here was something of really greater importance than the farmers of America **had ever had before.** They realized that, if farmers only had all of these startling and amazing facts, it would, in thousands of cases, make a radical and complete change in farm life. They realized that the farm families who are keen and shrewd enough to grasp these wonderful opportunities could easily and soon be on the road to **complete independence** and **comfort.**

So **Farm and Fireside** has put each and every fact about these 267 by-products into a book—a book call **"FARM BY-PRODUCTS,"** a remarkable book that represents several thousands of dollars outlay and which **ought to do more for the American farmer than any book ever printed!**

This 100-page book "FARM BY-PRODUCTS," has been prepared and printed at enormous expense. It has been made for the readers of **Farm and Fireside,** and every **Farm and Fireside** reader can get the book without one cent of expense.

Only One Way to Get It

"FARM BY-PRODUCTS," the only treatise of its kind ever prepared, is fully protected by copyright. Nobody but **Farm and Fireside** can offer this book, and only **Farm and Fireside** readers get it, because it was written exclusively for the benefit of **Farm and Fireside** readers.

This truly amazing book is so complete that, as soon as you get it, you and your wife and the children can begin at once to dam up the stream of gold which has **been running to waste on your farm.** **"FARM BY-PRODUCTS"** tells how to prepare each of these valuable by-products for market, where to sell it, how to get the biggest cash price; in short, how to change "Waste" into shining American dollars, just as any smart factory manager would do.

Every member of the family—the boys and girls, too—can play a part and do their share in bringing in these new profits. In fact, it is the women and children who can do even more than the men to rescue their wasted money.

How to Get Your Copy of "Farm By-Products"

Every reader of **Farm and Fireside** who sends his renewal subscription to **Farm and Fireside** in the **next 30 days** will be presented with a copy of **"FARM BY-PRODUCTS."** He will receive the book without its costing him a cent, postage fully prepaid. **"FARM BY-PRODUCTS"** will show you exactly how to make your farm pay better than it ever has before. The secrets in this great book will store up money for you for a rainy day, and will buy long-desired comforts.

Farm and Fireside's Offer

Every **Farm and Fireside** reader who sends a subscription in the **next thirty days** will receive a copy of "Farm By-Products" without cost.

Send $1.00 for a 3-year subscription to **Farm and Fireside** (72 numbers.)

You will receive "Farm By-Products" **without cost.**

OR

Send 50c for a 1-year subscription to **Farm and Fireside** (24 numbers).

You will receive "Farm By-Products" **without cost.**

In order to obtain your copy of "Farm By-Products" it will pay you to send your subscription now. If your present subscription has not expired, your new subscription will be entered to begin the month after your present subscription does expire.

We know that you will find it the most valuable book you ever owned. **Farm and Fireide's** reputation of 33 years is back of this book, "Farm By-Products." Send the attached coupon today (or write your order on a piece of paper). **The Book is without cost.** Send for it to-day.

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Fill out and mail the coupon at once. We authorize you to do so with the distinct understanding that **if you are not more than pleased with "FARM BY-PRODUCTS," if you do not learn things you never knew before, we will return your money.** We want every reader of **Farm and Fireside** to see this wonderful book.

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SUNDAY READING

What is Your Religion?

By Rev. John E. Bradley

RELIGION is life. The true religion of Jesus Christ not only warms the heart and elevates the soul, but it also molds the life. A religion which can not govern a man can not save him. It must take hold upon character and compel him to do what he believes is right. Religion does not consist in emotion, in delight in singing hymns and attending devotional services, however good and however helpful these may be. They have their place, but religion must go deeper and reach and arouse the conscience.

Spurgeon, in his helpful sermon, "Christ No Phantom," tells the story of Aunt Betsy, an old colored woman in Jamaica, who used to be continually singing, "Angel Gabriel come and take Aunt Betsy home to glory." When some one asked her if she really wanted to go, she said she did and was all ready. But when a wicked wag knocked at the door of her cabin in the dead of night and told her that he was the Angel Gabriel come to take Aunt Betsy home to glory, she said that "Aunt Betsy lives next door."

It is true that no one is perfect, that all make mistakes, that the lives of good people are disfigured by sin. But these blemishes and failures are only incidental. They do not truly represent the prevailing purpose of the heart. They do not indicate one's inner character and aspirations. They only illustrate human weakness and frailty. They are regretted and repented of and they often become stepping-stones to a stronger, clearer life as one learns from his faults and failures how to overcome his future temptations.

Religion is what one is, what one is striving to be. It is not merely the truth; it is the truth shown forth in good deeds—embodied in a life. It is not a name, but a principle. It is the tie which connects man with God. Religion makes one genuine; it helps him to outgrow his baser self and to become his higher and better self. It springs from love and bears fruit in worship toward God and service toward one's fellow-men. Therefore one's deepest needs are his religious needs; the strongest and richest lives are those which most fully receive and best illustrate the spirit of the Master.

A Good Reward

By Charles Henry Prather

MANY years ago a young lady worker in a Sunday-school in London went to the superintendent and asked for the privilege of getting up a class of boys for herself. She went out into the streets and alleys of the city and found them, ragged, dirty, poor and ignorant. In the crowd was one boy they called Bob. They gave him a new suit, and he came for two Sundays, then disappeared. The teacher found him in an alley—the suit in rags from fighting with other boys—and Bob as dirty as if he had never had a bath. She bought him another suit, and the next Sunday he was in his place, but the next time she saw Bob he was in his old haunt with a gang of urchins. She gave him the third suit, and kept a close watch on Bob for three weeks, then he was weaned from his old habits. In time he was converted and united with the church, and while he was still a young man he was licensed to preach. The boy was Rev. Robert Morrison, the first missionary to China and the greatest benefactor to the missionary cause in the world.

Life's Battle

IF YOU deem your life a failure,
  Then the world adopts your view;
If you bury all your talents,
  Who will mourn their loss but you?
If you class yourself with weaklings,
  Surely none will say you nay,
Thinking you have found your level,
  There the world will let you stay.

Don't expect the world to tell you
  Of your station and your worth;
Who should better know your value
  Than yourself of all the earth?
Stop lamenting and repining,
  If the world has used you ill,
You've a place among the useful,
  You can find it if you will.

If you'll face the world with courage,
  Then you'll find a helping hand;
Take your place among the foremost,
  They'll allow you room to stand.
Those who struggle wear the garlands,
  Only cowards sit and sigh.
In the din of Life's great battle
  Those who win are those who try.

—*Holland's Magazine.*

Little Faults

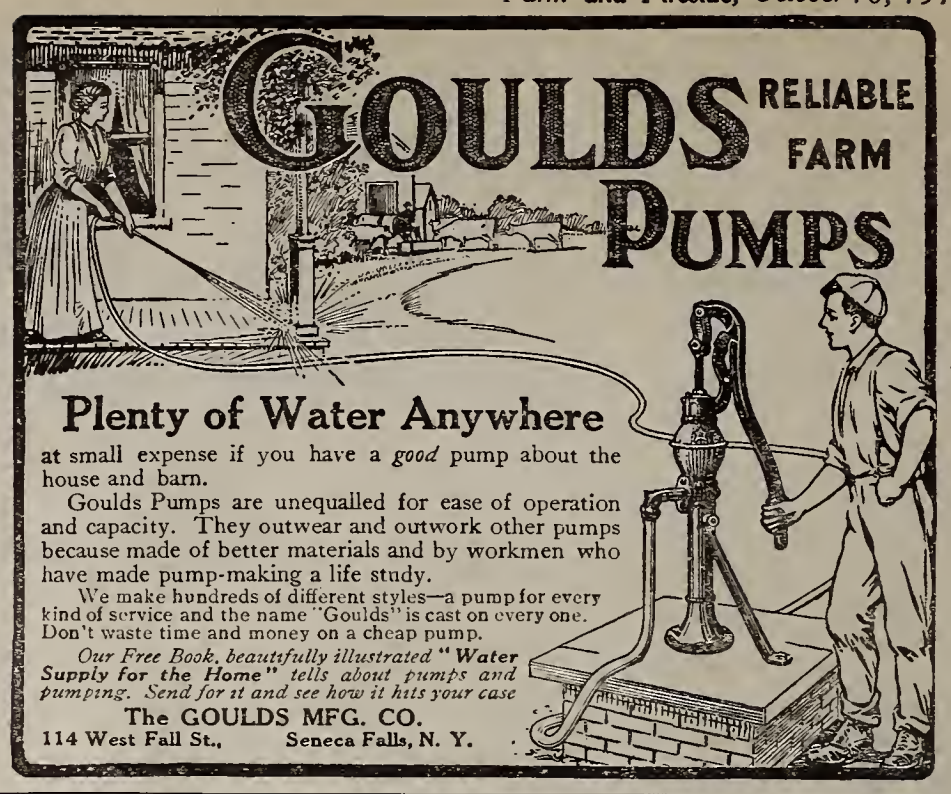
By Chas. Henry Prather

MANY, many years ago a bell hung in a high tower in a beautiful little town. The people of the town were very proud of their bell, for its fame had spread far and wide. Not because it was the finest bell in the world, but because of its sweet musical tones. In fact, it is said that people would stop on the streets, and strangers would stand and listen to its sweet tones pealing out the hour of the day. But, alas! one morning when the bell struck six o'clock, everybody who was awake knew that something was wrong with the beloved bell. The sweet music was gone. They said, "Our bell is cracked!" The old belfry-keeper made an investigation, but could find nothing the matter. The mayor came and could find nothing wrong with the bell. Then they sent for an expert, who came with powerful microscopes, and with these powerful lenses he found a tiny crack not as long as a baby's hand and so thin that these powerful lenses were needed to find it. Yet, in spite of the extreme smallness of the crack, it was large enough to turn the most beautiful harmonies into painful discord.

Thus it is that one fault in a character, one ugly-natured person in a family or church or community, can turn all the sweet music of life into ugly jangling and discord.

Our Characters

IT IS said that Achilles was disguised by his mother as a school girl and sent to a distant court in order that he might not be enlisted in the Trojan War. The wily Ulysses set out to find him, and, assuming the character of a peddler, displayed his wares. The girls chose feminine trinkets, but Achilles was attracted to a man's shield and mask, and thereby revealed himself. So we are constantly revealing our characters to the world by the choice we make in the things we do and the society we keep.



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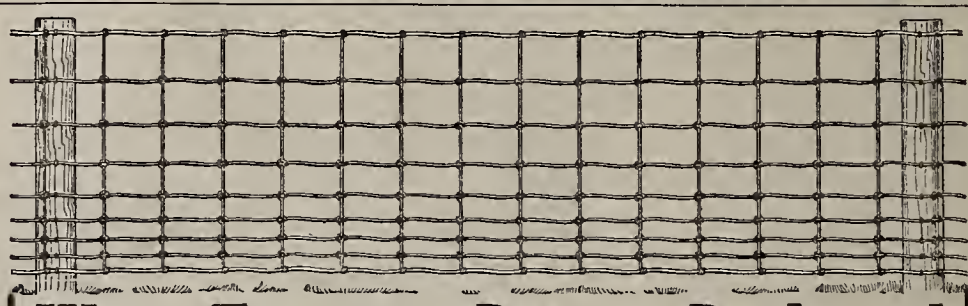

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FARM AND FIRESIDE

THE NATIONAL FARM PAPER

ESTABLISHED
1877

OCTOBER 25
1910

Read About a New Kind of Country School—Page Three

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With The Editor

It is probably a fact that every farm has the capacity to employ ten times as many hands as the average farm now. If so, why send the boys to town? I know a farmer near Sioux City who had nine hundred acres of which he sold off five hundred. Some of his men showed signs of uneasiness and finally asked him to indicate which were to be let go under the four-hundred-acre régime.

"What makes you think that any of you will have to go?" he asked.

"Why," said the spokesman, "you've sold off more'n half the land, haven't you?"

"Forget it!" said the owner. "I expect to hire more men than ever."

And he does. He keeps stock enough so that he covers one fourth the land with manure every year—buys feeders at the stock-yards and comes as near intensive farming as a corn and beef farm often approaches. He makes more money now than when he had nine hundred acres, and others are making use of what he sold.

Down in West Virginia, not very far from my farm, lives a man who used to have ill luck with hired help. He was farming on something like a hundred-acre scale, and was gradually sliding down that awful hill, at the bottom of which is the pit of failure and bankruptcy.

One day this man bought a cantaloupe for twelve cents. "Why," said he, "I could get rich raising them at half the price!" He planted four acres in cantaloupes. Why just four? Because he can attend to that without hiring. He produces—I am told—twelve hundred dollars from the four acres per year and is ahead of the hounds. He is a success. He refuses to grow more than the four acres for fear of making shipwreck on the reef of Farmer's Woe—hired help. The point I am making is that he found in his farm what to him was a hidden treasure.

These hidden treasures are everywhere. On a forty-acre farm near Baraboo, Wisconsin, William Toole does a larger business than is generally done on a quarter section. I was his guest last month, and if any one thinks that a forty-acre farm in the middle West necessarily means a two-for-a-nickel sort of life, I want to assure him that it is so only for the man who would be apt to lead a two-for-a-nickel life anyhow. Mr. Toole's business is of man's size.

He has always been a good botanist—as a farmer may easily be by just getting a little start somehow, and observing day by day the plants with which he is coöperating and fighting.

He has always liked flowers, especially pansies. He always had lots of them. People went into ecstacies over them and often asked for seeds and plants. Once in a while there came some one who insisted on making payment; but Mr. Toole was farming, and gave away pansies.

Something induced him to make an exhibit of just pansies at a state fair. It was the talk of the fair. No one had ever seen such pansies as he had created by his years of quiet work. He had suddenly become famous among florists. And it dawned upon him that his work was to produce pansies and pansy-seed. He added asters, geraniums and some other flowers. He now is growing nearly a hundred [illegible]nsies. He still carries on the little farm, does it scientifically and well, [illegible]r two in pansies bring in more money than all the rest. You see, he [illegible] acre or two and made another farm. When I was there, he was [illegible]er greenhouse. His business is growing all the time.

Perhaps Mr. Toole could have made more money by straight farming. It doesn't matter, if he could. But he could not have done it by ordinary farming on forty acres. He went down into that forty and found something nobody had thought of, until after he had gone down into himself and investigated. The unused acres of a man's brain often reveal themselves in new developments in his farm.

Mr. Toole has been happier in his pansy-growing I think than in the work he had been doing, because he is by nature a florist. Some of us are onion-men, some dairymen and some sheepmen, some are men designed for making the soil turn out corn, oats or apples. But the man who does the noteworthy in any of these first has to find its germ in himself. Unexpected capacities in the farm will come to the man who delves deeply enough in himself for waste and unused soil.

There is a man concealed in the ordinary man who can win when the surface man is beaten. A woman who has never been able to care for herself is left alone with a family to care for. Suddenly she becomes efficient. The powerful stimulus of maternal instinct makes her a little more than human. She does the impossible. This is the philosophy of the ground-hog case—he climbs the tree because he has to. Sometimes, however, the bigger person that is hidden in every ordinary person comes to the surface of its own accord. Then something new happens. If it happens on a farm, it is likely to manifest itself in the discovery of some of these hidden treasures of which I have spoken. Sometimes it sweeps through a community and we have a Hood River apple industry or a Kansas made new by alfalfa.

I believe it is possible to every farm. I believe it is the remedy for the flight of the children to the city or to new lands because "there isn't land enough." I look over my own farm and am a little comforted by the probability that I am preparing what was a deserted and gone-back farm for the production of more than it ever brought forth, even in the days of its virgin fertility. But I am haunted by the feeling that I have not even guessed at its productiveness. If I only could find the best that is in it! And the finding of it is not a matter of the sort of farm it is, but of the sort of farmer applied to it.

* * *

Last spring we planted about half our corn to a variety—which seems to have no name—developed by the Bureau of Plant Industry at Washington. The rest we put in to a variety long used here and well liked. The "government corn," as we call it, seems much the best. It stands on a steep hillside which washed badly. It is the last crop we shall ever take off that ground, which is in orchard. It seemed to my Western eyes last summer that the crop could not amount to much, but I believe it will yield thirty-five bushels to the acre as an average, and forty in spots. Not big corn, but pretty good for land that has been farmed since a soldier of Braddock's army stopped there, fell in love with our valley and stayed. I paid at the rate of a little over ten dollars an acre for it. We fertilized it with one hundred and fifty pounds of bone-meal per acre. It was in corn last year, and yielded about twenty-five bushels per acre. The uncertainty of results according to a single experiment is shown here. Is the corn on the hillside better because of better variety or because the top of the hill has been more relentlessly farmed or because the hillside gets the wash from the top? I think the variety has much to do with it—but I don't know. Nothing is sure in agriculture for the first twenty years.

Herbert Quick

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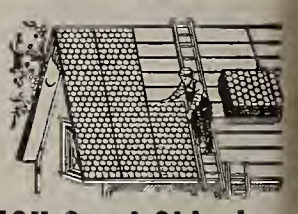

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FARM AND FIRESIDE

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The New Kind of Country Schools

By Jessie Field

"Two great general and immediate needs of country life stand out:

"First, effective coöperation among the farmers . . .

"Second, a new kind of schools in the country, which shall teach the children as much outdoors as indoors, and perhaps more, so that they will prepare for country life, and not as at present, mainly for life in town."— *From the Report of President Roosevelt's Country Life Commission.*

THE Progressive Club of country teachers in Page County, Iowa, was holding a monthly meeting, considering the kind of an education that they should bring to the country boy and girl—an education closely connected with his home life and the farm interests of the district. This earnest band of teachers believed that the time was here, when with farm land worth one hundred and fifty dollars per acre and farmers riding in automobiles, the country boy and girl should come into their own with the best kind of a practical, sensible and live education. With them, to believe was to do.

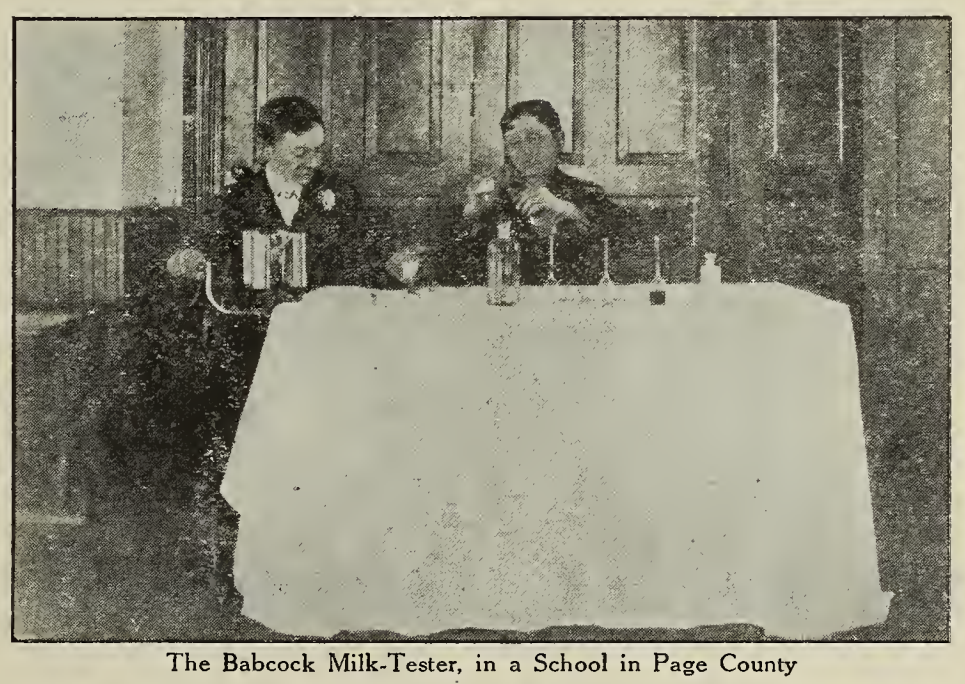
"I declare I don't know what to do about teaching agriculture in my school," said the teacher who always saw the difficulties in the way. "I have eight grades and every age from the little ones just starting in the primer to those who have graduated from the common schools and are back for review. I just can't get my program down to less than twenty-eight classes and I have to keep going every minute to get through with them."

"I'm not so much troubled to get time," said the town girl who was a graduate from the high school getting her first taste of country life. "I have a small school and plenty of time, but I have never lived in the country and I don't know a plow from a harrow."

"But we must do something. This problem is too vital and important in the lives of our pupils and to the districts where we teach to be neglected. Even if we have to leave out some of the useless things we are teaching now. I am sure if I knew how to teach things about the farm, it would help me in all the other work of the school, for my pupils are always the most interested in the things they know about at home," said the teacher with vision. "I have found one thing that is easy to do and helps. I had the boys make a rack for holding bulletins, then I had all the pupils write for farm bulletins to the United States and State Department of Agriculture. We have these classified under Corn, Forestry, Home, etc., and the fact that they show honest wear is a testimony that we use them. Even the farmers of our district come in and use them. It's worth a good deal to us from that standpoint."

"We have done something along the same line at our school," added another teacher. "We have considered current events of special interest to farmers and made a scrap-book of clippings of interest to farmers from magazines, daily papers and agricultural journals."

"And there's the Babcock milk-tester. We had the one that belongs to the county superintendent in our school. It only takes a few minutes to make a test. It can be done the last thing at night. The people in my district begged to have it left longer," came from the teacher who could at all times interest the people.



The Babcock Milk-Tester, in a School in Page County

And so the ideas were exchanged of things that had been actually accomplished. Some had had classes in agriculture among their advanced pupils. Almost all of them had school gardens. Some had fixed farm corners in their school-rooms in the fall, festooned with the products of the farm. Working out farm devices in manual training, with improvised work-benches in the basement and tools brought by the children; learning to tie various kinds of knots that would be useful on the farm; making the germinating test of corn—all these things were told.

As a unit these enthusiastic teachers testified to the great value of letting boys and girls learn how to do things and that when they did this they were so much more alive and so much more interested that all their school work was far more thoroughly done. Then one teacher who had the ability to think of new things said, "Couldn't we have some problems in farm arithmetic? We all of us use problems besides those in the text-book for further drill and so that the pupils will learn not to be too dependent on the answers. Every one of these problems should be problems such as the child has to meet in real life. Of course, I suppose we will have to go on teaching compound proportion, stocks and bonds, the binomial theorem, etc., because they are in the book. Although not one of you ever had a problem like these to work, unless it were in an examination. But I'll declare I am going to teach the boys and girls the things they will have to use as of first importance."

And so with the help of the teachers and farmers we made out a little book of problems in drainage, farm sales, farm crops (including the measurement of corn and other grain in bins, cribs and wagons), rotation of crops, the dairy, poultry, insects and birds and their relation to farm crops, etc. These problems are given to the classes in different grades and must be completed before the pupil finishes the eighth grade. Sometimes a class of older children who can come only in the winter term is organized for this work especially.

The work has met with great popularity. Farmers have talked the problems over on the 'phone and have learned to think more of their schools because their children are learning there the things they need to know at home.

You know the old complaint—and a true one—of the inability of children to put knowledge into practice. Many a farmer can say truly of his boy, "Well, he may know lots of arithmetic in the book, but he couldn't figure up the scale tickets or the milk-checks at home." The boy asks, "Do you times it or is it into? I could work it if it were oranges. Problems like that are about oranges in the book."

Contrast this with an actual occurrence in Page County. Farmer A wanted to buy a stack of hay from Farmer B. But they could not agree as to the amount of hay in the stack and neither had a reliable rule for computing it. Now Mr. A needed that hay very much and when he went home at night he looked tired and worried. At supper his wife noticed this and asked what was the trouble. He replied, "I can't make a deal for the hay with Mr. B. We don't agree as to the amount in the stack and we have no rule by which we can tell the number of tons in it. I won't pay for more than is there and he is afraid he won't get pay enough and so it stands."

The bright-eyed son looked up eagerly. "Pa, have you the measurements for the stack. Is it wild hay? Let me have them. We learned just last week at school how to measure hay in the stack."

So the number of tons were computed—the farmer and the farmer-to-be—with their heads close together over the paper. The telephone rang up Mr. B and the deal was made that night. And the farmer decided anew that the taxes which he paid for his school and its good teacher were the best investment that he had ever made. Down at that school his boys and his girl were securing the knowledge they would need to use when they were on farms of their own so that no one could take advantage of them or pull the wool over their eyes in a business deal.

We do not think that this idea of teaching a child through his own experiences and surroundings is at all original. In fact, all the greatest teachers since the world began have taught in this way. And I further believe that every really first-class country-school teacher has always taught farm arithmetic. I remember one night an old Swedish farmer who came out to the road and stopped me to tell me how he appreciated the work in farm arithmetic that his children were getting. He said that back in Illinois where he went to school when a boy he had had one fine man for a teacher who had taught them such things and he had found it so helpful to him that he always remembered that teacher with gratitude.

With the new things we are learning in agriculture every year there is a chance to teach lessons in intelligent farming through the work in farm arithmetic—lessons resulting in better methods of home farming.

Remember that figures do not lie. Then figure out the following problems in farm arithmetic and see what their teaching is.

1. Suppose a forty-acre field planted to corn for five years in succession produces sixty bushels per acre the first year, fifty-five the second, forty-three the third, thirty-three the fourth and thirty the fifth. What will be the value of the corn grown in the five years at forty cents per bushel?

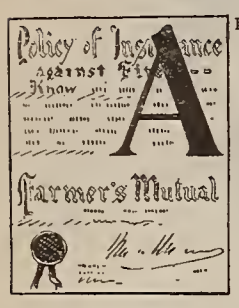
2. Suppose, instead of growing corn continuously, the following rotation was practised: First year, forty acres of corn, sixty bushels per acre, at forty cents. Second year, forty acres of oats, sixty bushels per acre, at 30 cents. Third year, forty acres of clover, three tons per acre, at eight dollars per ton. Fourth year, forty acres of timothy, two tons per acre, nine dollars per ton. Fifth year, forty acres of corn, seventy bushels per acre, at 40 cents per bushel. Find the value of the five years' crop.

[CONCLUDED ON PAGE 4]

The Home Stretch—Twenty Best Corn Judges in the County Competing for Places on the Boys' Team

Can't We Coöperate?

Two Points of View and Some Concrete Proofs



A LETTER from a subscriber in the state of Washington shows so well the difficulties that stand in the way of coöperation on the part of a people who don't know how to coöperate that we take pleasure in publishing it entire. It is as follows:

Your article of August 25th entitled "Are We Americans Up-to-Date?" is a good one and corresponds with what the European farmers told me two years ago. They said that they could hardly exist without coöperation. And I think you hit the nail on the head when you said: "We are the blamedest smartest race under the sun"—and that is just the reason why the farmers of this country can not coöperate. You ask, "Does the reader belong to any farmers' organization?" I have belonged and I do, but I would have been one thousand dollars better off if I had stood clear of coöperation. Some years ago we organized a farmers' coöperative insurance company and everything went all right till one of the members was burned out; then the "smart" set would not pay their dues, and the company fell to pieces. About five years ago I joined a coöperative creamery, and the first year I received sixty cents as interest or dividend on my money, and that was the last of it. Three years ago twenty of us formed a stock company and bought a stallion for five thousand dollars. Now, if it had been a paying proposition, a few would have scratched their finger-nails off to gobble it all up; but being a total loss or failure the smart set disposed of their property and shouldered it off on a few foreigners to pay the five thousand dollars. So my advice to my brother farmers is always to steer clear of coöperation.

Coöperation is as important for the American farmer as for his European brother. Nowhere is the farmer more beautifully robbed and his substance wasted by a bad system of marketing and buying than in the United States. That he is not completely on the financial rocks is owing to the fact that he is farming land which is not yet quite so costly as that of most parts of Europe, and that his soil needs less commercial fertilizer.

Our subscriber should study the reasons why the insurance organization, the creamery and the stallion company failed. There are plenty of old and successful coöperative insurance companies in the United States—formed and run by farmers. There are twenty-six coöperative live-stock breeders' associations in Wisconsin. There are many farmers' elevators in Iowa and the Dakotas, which have saved the coöperators much money. In Minnesota and Wisconsin the coöperative creameries and dairies are driving the commercial ones out of business and enriching the dairymen. There are plenty of splendidly successful coöperative truckers, fruit-growers and other associations in America. But farmers desiring to form such associations must not go into it without studying methods and getting the value of the experience of other associations. They should ask advice from men who have studied it, and carefully guard against the dangers such as those which cost our subscriber so dearly. There is at almost every state experiment station or agricultural college a man who is making a specialty of agricultural organization. Farmers can make a success of coöperation if they once get the full truth about it and know its value. If is a matter of learning how. Men are pretty much alike everywhere, at bottom.

This is illustrated by the happier experience of an Ohio reader who, with his neighbors, has learned how to coöperate honestly. He writes:

A great many farmers exult too much in the idea of a farmer's independence, his free and unrestricted mode of living and his unbossed condition generally. But as the years pass by we can see that our city brothers who are "making good" avail themselves of every possible chance to coöperate with their fellow-men in business. So, too, the modern farmer is beginning to see the advantages of coöperation. He loses some independence and freedom by it, but in these days of close competition and trust control he must adopt these up-to-date methods or be the loser.

In 1894 the farmers of Wood County, Ohio, concluded that it was high time for them to look for cheaper protection against fire, lightning and wind. Excessive rates were established for insuring farm property. On November 27, 1894, at a meeting called to consider this, the Wood County Farmers' Mutual Fire Association was organized and commenced business in December of the same year. At this time the officers consisted of a president, a secretary, a treasurer and a board of six directors (afterward changed to ten). These directors act as agents for the association and are not allowed more than two dollars per day for actual time put in. The other officers are paid at the same rate, except the secretary, whose pay is twenty cents per hour. The secretary is a mighty competent man for the place, being an ex-schoolmaster of years of experience and an expert mathematician, so it does not require a very great amount of time for his work.

The secretary's duties are: Figuring each member's share of annual assessment, mailing same to each member, keeping minutes of any and all meetings of directors and of the annual meeting of members and making an annual report to the state insurance department.

Since its organization the company has made twenty assessments in all, not including that of 1910.

At first an assessment was made when the rate reached fifteen cents per one hundred dollars of risk, but later—as at present—only one is made each year, on account of the expense. The members number 3,415 and the postage bill is $63.30 for one trip, besides the stationery and the secretary's time.

Seven million eighty thousand dollars is the amount of risk now carried entirely on country property, and all inside the county.

Comparing the rates of this association with a commercial company's proposition made less than a month ago, for wind, lightning and fire risk for one year, the rate is forty-six and two thirds cents per hundred dollars, as against twenty-two cents per one hundred dollars in the coöperative association. On our own risk of $2,860 we save the difference between $6.29 and $13.35 on one year's protection. On a number of years the mutual rate varies as shown by the records.

For 1903 we paid 21 cents per $100.
For 1905 we paid 28 cents per $100.
For 1906 we paid 26 cents per $100.
For 1907 we paid 16 cents per $100.
For 1908 we paid 15 cents per $100.
For 1909 we paid 22 cents per $100.

Our receipt for 1904 is mislaid and so I leave it out. The average for six years is twenty-one and one third cents per hundred.

As soon as a loss occurs to any member a committee is selected of three members to go at once and adjust the damage. If necessary, a special meeting of the directors is called to pass on the report of this investigating committee. Very seldom is any serious kick made by either party. So the amount lost is paid to the victim of the fire and consequently there is peace in the family.

The New Kind of Country School

[CONTINUED FROM PAGE 3]

3. Which of the two plans would produce the most money in five years? How much more? Which would leave the land in the best condition at the end of five years? Are there any other advantages to either plan?

Every school in the county teaches these problems and even the young teachers from town are able to handle the work satisfactorily. The series of problems, printed in a neat book, have been distributed to every school and have a permanent place in the school library. Besides this, the teachers frequently have real problems brought from home including scale tickets, transactions at sales and the measurement of corn-cribs and the stand of corn at home.

So much for the work in the schoolroom. Besides this there is much that we find we can do for the country boys and girls outside of school-hours, yet made possible through the enthusiasm and interest of schools and teachers. State Superintendent Blair of Illinois says, "If we can not bring corn-growing to school, we can set the schools to growing corn." In this spirit we have set our boys to growing corn and our girls to cooking, sewing and other home work.

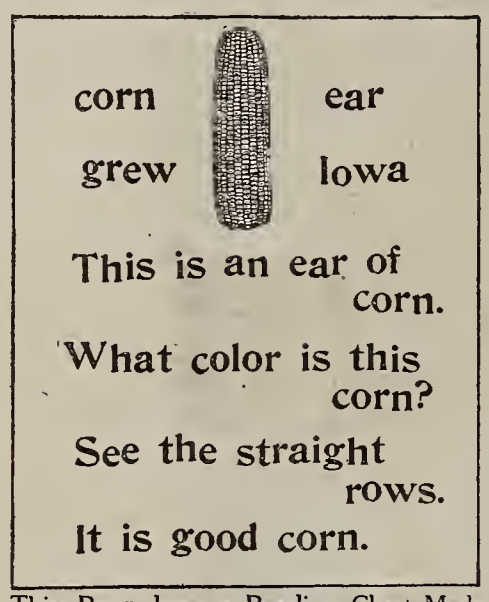
We have found that one of the greatest needs for country children is to find out their own powers. They need to find that there is something—be it spelling, ciphering, writing essays, growing corn or baking bread—which they can do and do well. So we have had contests along these lines. First a contest in the home district; then the winners from the districts competing in the township and as a finish the township winners competing in the county contest at the summer chautauqua.

For the past two years we have had contests in essay-writing on the subject, "Farm Life—Why I Like It." The essays are written and submitted to the county superintendent, who gives them to various leading editors and others throughout the county by townships and these people select the best essay in each township. Then the child having the winning essay of the township commits it to memory and gives it, together with the winners from all other townships, one evening during Farmers' Institute. This year forty dollars in prizes were given by the Farmers' Institute for this purpose and the crowd was so large that an overflow meeting was necessary.

Three years ago we organized our Boys' Agricultural Club. Through the coöperation of the leading corn-breeders of the county enough pure-bred seed-corn was given to supply each boy who joined enough to plant a half acre after an individual ear test had been given to it all. This the boys planted and cared for, with good success. The number of boys growing corn has increased each year. During the past season, about three hundred boys exhibited corn and grain at the County Boys' Corn Show and the same number of girls showing exhibits of their sewing.

Merchants and manufacturers and farmers gave premiums for the local show amounting to three hundred dollars. The exhibits were also entered at the National Corn Show, where the Page County boys took first in every class in corn for Iowa and the girls carried off a good many premiums in sewing.

The county exhibit as a whole won first place, securing as a premium a Brush automobile, which was turned over to the county superintendent by the boys and girls, so she might get around to their schools oftener. A Page County boy also won Grand Champion Sweepstakes in the ten-ear class in the Junior State Corn Show. Altogether, the children of Page County have won during the past year prizes amounting to over fifteen hundred dollars.



This Reproduces a Reading Chart Made With Stencil by a Page County Teacher

But the accomplishment in which we take the greatest pride is the winning of the Kimball's Dairy Farmer trophy for the best boys' corn-judging team in the state. We had conducted two classes in corn-judging for the boys on Saturdays in the fall of 1908, with experts from our State Agricultural College in charge. At our last county farmers' picnic, which is held each year in August at our agricultural experiment station on our county farm, we held a boys' competitive corn-judging contest. Now this picnic had never in former years been very well attended, but last summer, early in the forenoon, automobiles and buggies began to roll in from all parts of the county. Each vehicle contained one or more boys, who hurried to the big barn to get their number assigned for the contest. It was a banner crowd—the biggest that ever attended a county farmers' picnic in this county. It was like the biggest day at the county fair. All day long the boys' corn-judging contest continued. The boys placed the first five ears in the samples and gave oral reasons for their placing. One of the farmers who helped was busy all day adding up scores. While one of the men from the State Agricultural College talked to the crowd, the other one took charge of the boys. When night came, the rush had been so great that we were not sure which three of the boys were the strongest, so we selected the twenty scoring highest and told them to come in November for a final contest.

They were all present on that Saturday in November and a senior student from our state college was in charge. In the meantime every boy of the twenty had been furnished with considerable material on corn-judging and had studied it. In the evening, after the chores were done, you might see one of these boys bring some corn in on the sitting-room table, pull down a book or two and some bulletins and score-cards from the shelf and, with the father and the big brother and the hired man as assistants, dig deep into the fine points of corn-judging. And the mother removed the corn to the top of the pantry the next day and didn't say a word.

On the day of the final contest one boy arrived at nine o'clock quite out of breath and much worried for fear he was too late. In the afternoon he casually remarked that, as he had no other way to come, he had walked the twelve miles and it took a long time. He came in fourth in the contest.

At this final contest, besides the work in judging, the boys were given a written examination on corn. The three boys scoring highest in all their work were selected to represent the county at the state contest. As it happened, these boys lived in different parts of the county and were each fourteen years old. They are real country boys and know what it means to grow corn as well as to judge it.

It had been promised that the three boys composing the county team should have all their expenses paid to attend the Short Course at our State Agricultural College in January, at the close of which the contest for the trophy was to be held. How these expenses were to be paid was the next question. The matter was explained to W. C. Brown, president of the New York Central Railroad, who owns a fine farm in Page County, and by return mail came his check to cover their expenses, together with words of good cheer and belief in the worth of the work they were doing. His advice to the boys was, "Stay on the farm. It will be the best business in the world."

So the boys went to Ames and the rest of the story is just that of the hard work and grit by which they won the splendid trophy as the best boys' corn-judging team in the state.

Last spring about six hundred boys and girls enrolled for work in corn-growing and breeding, growing oats, gardening, sewing, cooking or home management, in competition for prizes offered locally in connection with the county fair and farmers' institute. One bank has voluntarily offered fifty dollars for a thirty-ear class for the boys and one a hundred dollars for an acre-yield contest. Farmers have offered special prizes for townships and school districts.

Last summer we had a Boys' Agricultural Encampment at the time of the chautauqua at our county seat. Work in corn and stock judging was given by experts from the state college, and games and athletics and other work was in charge of the state Y. M. C. A. secretary. At the close of the week the first contest was held to decide on the corn-judging team for next year.

The greatest factors in securing results in this work have been the untiring work and vision of strong county teachers, the enthusiastic loyalty of all the people and their understanding of its benefit to their children and the coöperation of the Extension Department of our State College of Agriculture.

And now I feel that I can not close this series of articles without again expressing my earnest desire to see every country boy and girl have the best chance possible to develop into strong and useful manhood and womanhood. I know that this is what you want. The schools belong to the country people and they can make them what they will. I wish I might help you with the problems of your school. If there is anything that you wish to know, I will be glad to answer any letters from you. Remember, always, that the best is none too good for the country boy and girl.

Horses for the Market

Some Principles Every Breeder Ought to Know—By David Buffum

A Tiny Type

THE farmer who desires to raise horses for market should first consider carefully and earnestly his choice of the kind of horses he shall raise. Shall it be draft stock, carriage horses, thoroughbreds or trotters? There is a demand for all. Draft horses are constantly needed; fine carriage horses were never worth more than they are now, and horses for speed will undoubtedly be wanted as long as civilization endures and our human nature remains what it is.

First of all comes the question of fitness of locality. As we have said, horses can be raised successfully in any place where it is fit to farm at all; nevertheless, when it comes to the choice of breed, the question of environment can not be wholly ignored. A rough, hilly farm, for instance, where the pasturage is scanty and the animals have to "rustle" more or less for a living, is a very poor place in which to raise heavy draft horses. On the other hand, a rich, level country is especially well suited to such stock, and is equally unsuited to the raising of little ponies, whose smallness is the measure of their value.

These, it will be observed, are extreme types and for that reason are taken as examples. For all general truths should be accepted with common sense, and it is along the means between these extremes that the drawbacks of an environment which may not, in itself, be the best, can be successfully overcome.

Of equal importance is the matter of market. If a man goes to raising carriage stock in a locality where every one else is raising draft stock, even if the country is equally well adapted to it, he will often find himself somewhat handicapped in selling, simply because the place is known by its principal output and its buyers are looking for draft stock and nothing else. The same thing, of course, applies to the breeder of draft stock in a carriage-horse-breeding neighborhood, and the lesson is simply that it is easier and generally more profitable to go with the stream than against it—although there are many neighborhoods where all kinds of horses are raised and where one can be raised as advantageously as another.

But most of all, in my opinion, should the breeder consider his own personal tastes and inclinations. What kind of horse attracts him most? And how much time and attention will he bestow upon his horses? Upon the answer to these questions his choice should largely depend.

Next to ponies, which are the least care of all, draft stock is the easiest managed—partly because it is rather less liable to accident than other kinds and partly because, although it must be practically matured to sell, very little is required in the way of preparation beyond having it in nice condition and sufficiently well broken to go all right in harness. Carriage horses, on the other hand, require considerable handling; they must, beyond all things, show well, and an evident greenness will often upset a sale which otherwise would go through all right. All this takes time and attention. Trotting stock also requires more preparation than draft, although, in the care of horses raised expressly for speed, it is usually better to sell when quite young and let the buyer attend to all the training, except the mere breaking to harness.

The man who has not the time and patience for all this careful training or who can not bring to his work that deep interest that leads him to accept philosophically the greater risks and disappointments that go with the breeding of road stock had best confine himself to the safer and easier task of raising draft horses. Nor need he fear that the field will not furnish ample scope for all the skill and knowledge he may have. For in draft stock, as in all others, the handsomest and best bring the good prices—the prices that make it worth while and add zest and pleasure to the breeder's work. And the best product, though easier of attainment in some lines than in others, is never to be had without both care and pains.

But if he can bring to the work of raising horses the patience that does not tire and the zeal that does not flag; if he is willing to give to it the best that is in him of intelligence and study and perseverance and realizes that the improvement of the highest of our domestic animals is well worthy of the sacrifice; if he has that innate love of the horse which brings insight into character and nature as well as physical features, then, by all means, let him choose some one of the finer types of road stock. It will yield him a commensurate return in money and also a pleasure and satisfaction that will last as long as he lives.

The prizes to be won in horse-breeding are in proportion to the risks taken—a condition that applies, in fact, to pretty nearly every other industry. And so, as it is easier to raise draft horses, their breeder is more certain of a fairly uniform price. But the highest prices of all go to the best of the finer types, the animals that are the hardest of all to produce.

The kind of horse once chosen, the next step for the breeder is to have a clear, distinct picture in his mind of the type at which he aims and always breed with that end in view. This is the first principle in successful breeding and it can never be neglected with impunity. There is an extremely erroneous idea in many minds that if the breeder has his foundation stock of some pure and distinct breed, he will then be saved this trouble and that all he will have to do is to breed his registered mares to a registered horse of the same kind. But there is no royal road in stock-breeding; and if the same care is not observed in the mating of pure-bred parents that would be in the case of other animals, the stock will surely and swiftly deteriorate. It seems about needless to add that the ideal at which the breeder aims should be first of all perfect in conformation. For instance, if you are raising Percherons, in which large size is a desirable feature, have the size, by all means, if possible, but do not sacrifice symmetry to it; symmetry should come first. I am convinced that even the breeders of trotters can make more money in the long run and have a far more satisfactory experience when they breed for type and conformation rather than speed. A great many breeders of trotting stock, in fact, do this. For speed, however desirable, is not, in its superlative degree, easily attained; whereas beauty, style, action and finish, which are easier to produce, are always in keen demand and always command a high price.

In deciding what stallion to use, the criterion by which he should always, if possible, be judged is the quality of his get. This is the highest test of the value of any sire, and it is obvious that, if his get is uniformly superior, his individual qualities are of little consequence in comparison. But if, as in the case of a young and untried horse, this proof of his value is wanting, he must be judged by his breeding and his merits as an individual. He should run true to his type, whatever that may be—whether thoroughbred, carriage or draft—and his pedigree should be free from crosses with other types. This forefends against the danger of reversion, or "taking back," which, when a cross-bred stallion is used, is always imminent. Reversion, it is true, may also occur in pure-bred and homogeneously-bred stock; but it will be readily seen that if the foal takes back to a horse of the same kind as his sire but little mischief is done. It is when he takes back to a horse of a different kind that his breeder's calculations are upset.

The mare should always be of somewhat the same type as the stallion; difference in size does not matter very much, as long as the type is reasonably similar—though, of course, the difference should not be excessive. It is only when the two parents are somewhat alike in type and points that they assimilate nicely and the points of one are modified or strengthened, as the case may be, by those of the other. It is in this way that good points are fixed and perpetuated and along no other road can much progress be made in breeding. The folly, therefore, of mating extremes, in the hope that the good points of one will offset the bad points of the other, should be apparent; if a weedy, long-backed and loosely put-up mare be bred to a very chunky and compact stallion—her exact opposite in type—the resulting foal is very rarely a happy medium between the two; symmetrical, well-proportioned animals are not produced in that way.

And, likewise, if both parents have good points, the mating of extremes is unwise; it would be foolish, for instance, to breed a thoroughbred mare to a draft stallion or a heavy draft mare to a thoroughbred stallion—although, if we are to choose between evils, the latter is the less objectionable of the two.

Some years ago a farmer came to me with a mare that he wanted to breed. I had three stallions at the time; one of trotting and thorough blood (his sire a trotter, his dam a thoroughbred); one a Percheron, and one a small pony. He looked them all over and decided upon the Percheron as being the heaviest and most compact. The mare was an ill-looking brute—weedy, long-backed, upright-shouldered, cow-hocked and generally as lacking in good points as anything I ever saw. To my expressed doubts of the wisdom of breeding such an animal, her owner averred that her points might be a trifle off, maybe, but the horse would set that all right. In point of fact, he did not; I doubt if anything on earth could have set right that combination of horrors, and the resulting colt was such a disgrace to his sire that I objected to the mare being brought back a second time.

In connection with this same stallion I recall another instance which illustrates the point, though in a different way, and that was the breeding to him of a thoroughbred mare. The mare was a beauty and had the best of points, but was, in my opinion, of too slender and delicate a type to be bred to so heavy a horse. The colt, however, proved to be very handsome and, as he grew and developed, was frequently pointed out to me as evidence of my mistaken judgment. Still, I had my doubts; the mingling of types in him was not perfect and his limbs, though beautifully formed, were not as heavy as they should be for his body. As he matured, this disproportion became more evident and I was not surprised when at four years he threw out a curb on each hind leg.

Both parents of this colt were sound and of sound lineage. The trouble was that the cross was too extreme.

The disposition of a horse is a thing of so much importance that no breeder can afford to overlook it. It is, of course, a well-known fact that many naturally good colts are spoiled and have their tempers soured by bad management. But this does not account, by any means, for all the bad ones. Horses vary in character and disposition as much as human beings do and come by their traits in the same way—by inheritance.

The disposition of a horse seems to be inherited more from his dam than his sire. So true is this that, while I have known many good-dispositioned colts whose sires were not very pleasant animals, I have known very few who were the offspring of peevish, irritable and treacherous mares. Such mares should never be used for breeding, unless some exceptional circumstance (as the possession of unusual speed or endurance) may make it seem worth while, and even then its expediency may often be doubted. For the disposition of a horse affects his value very materially and there are enough good mares in the world to raise colts from, without using the bad ones.

The instances I have met with of bad disposition that was clearly the result of inheritance have been numerous. One of them, which seemed to me of special interest, is, I think, worth recounting.

A former neighbor of mine, a carpenter by trade, with little knowledge of horses, was seized by a desire to raise a fast horse. For this purpose he bought a black mare, of unknown breeding, but very handsome and rather fast; he bought her for a mere song because she was of a disposition so irritable and treacherous as to render her of little real value. With the judgment to be expected of a man

[CONCLUDED ON PAGE 7]

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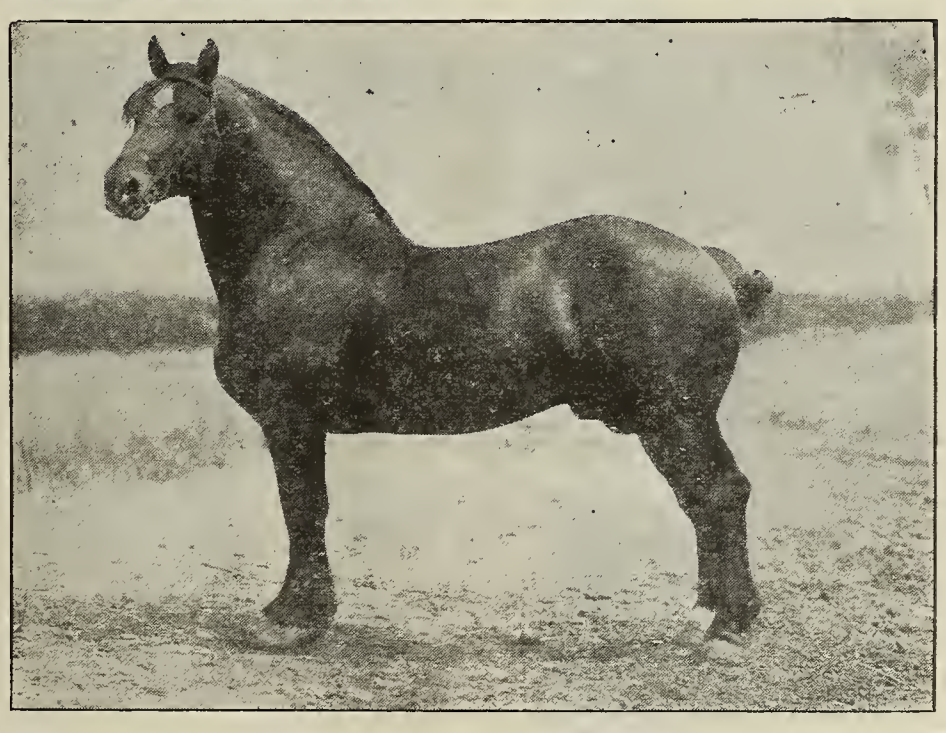

The Folly of Mating Unlike Types is Well Brought Out by a Comparison of the Trotter Above With the Percheron Stallion. A Mating of These Excellent Animals Would Almost Certainly Produce a Worthless Nondescript

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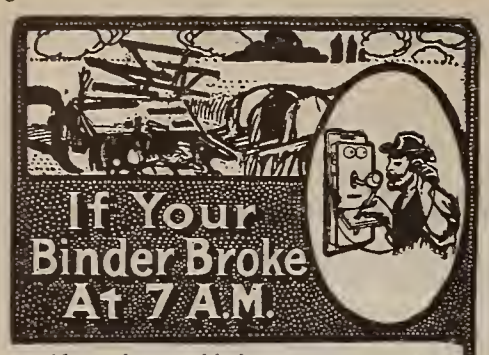

would you have to hitch up—go to town and take a *chance* on the dealer having the part in stock? Or would you call up on the telephone—make *sure* the part is there—and have it back in time for a fair day's work?

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The Headwork Shop

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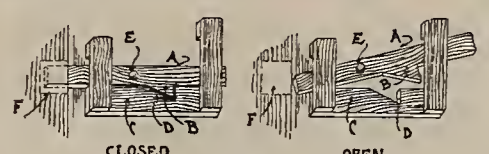
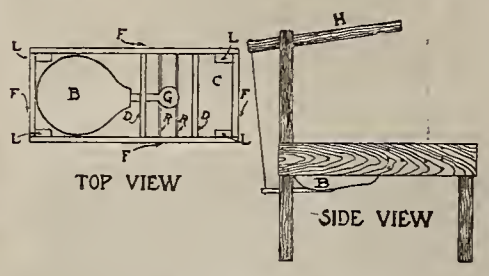


An Improved Latch

It is frequently convenient to use a slide latch for gates or doors. This slide is made of wood about twelve by one inches and fastened so as to slide into a slot or groove in the jamb (F). It is a very simple and substantial fastener, but as usually made is easily rubbed open. Here is an easy remedy for this. Cut the slide (A) with triangular stop (B) extending from the lower side. Provide the piece that it works on with notch (D) to match this projection. Before this slide can be opened it must be pushed up and then slid back. E is a wooden pin to give a hand hold. R. E. Rogers.



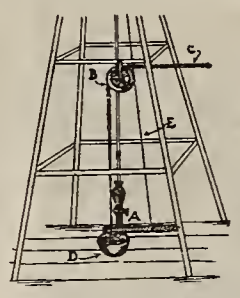
A Farmer's Forge

With this forge a farmer can save dollars and time in case of a breakdown on a busy day.

F is frame, B is bellows, G is goose-nest, RR are rods, C is coal-box, LLLL are legs, DD division boards, H is handle working bellows. Get a bellows twenty-four or thirty inches in width and a goose-nest, or tuyere, and you have the principal parts. The framing should be of one-by-six-inch boards, the length according to your bellows, fire-box and coal-box. The legs should be two-by-fours three feet high; one of the back legs should extend higher to carry the handle (H). The bottom of the coal-box may be of boards or sheet iron. The bottom of the fire-box consists of the rods which support the goose-nest with cement molded on them and the goose-nest for a fire-pit.

The coal-box may be left off. It will make the frame shorter, but if you have plenty of room, it is better left on. Rods may be put through the ends of the frame as in the middle to make it stronger. This forge weighs about one hundred and fifty pounds and does not cost so very much.

Geo. Turner.



Step-Saver

A device to save steps in putting the wind-mill in and out of gear is made as follows:

Take the small hand lever off and put on a new one (A) about six feet long. Fasten this on the gear wire as before. Put a pulley (B) about twenty or thirty feet above the ground and run a wire from the end of the lever over this pulley and to the point where you wish to operate the lever. Splice a piece of chain (C) into the wire to run over the pulley. Weight (D) is placed upon the lever to hold it down when out of gear—a kettle of stones is good.

By pulling on the running wire, the weight is raised, letting up on the gear wire (E), which puts the wind-mill in gear. This will save many steps, especially where the well is twenty or thirty rods from the house.

E. J. Weholin.

For the three best contributions to the Headwork Shop we pay five dollars each, and for all the rest our regular rates. The three prizes are awarded by our subscribers by post-card vote. Any member of a subscriber's family can cast the vote, if the name of the subscriber is given and no one else in the family is voting. Have you got an original labor-saving kink you think would fit in this department? We'd like to see it. Anyway, we'd like to have you vote on the three ideas that strike you as best this time. Editor.

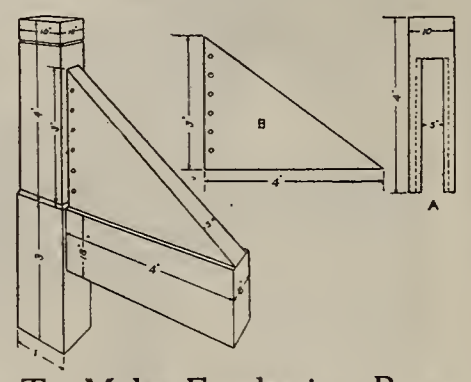
Durable Farm Paint

Take as much paint-oil as required for the job. Add enough fine Portland cement to make it of the right consistency—not too thick. Brandon red, yellow ocher or any dry colors can be added. Stir frequently and a hard, long-wearing surface is produced. This paint is so cheap that a generous supply can be used and the oil will preserve the wood.

W. T. Henderson.

Hog-Ringing Stanchion

I have found the following handy for holding the hogs while ringing. Set two uprights in the ground about three and one half feet apart, nail a piece of two-by-four across the bottom, bore several holes in it and nail two similar pieces across the top with holes in them. The top pieces should be about three and one half feet from the ground. Nail an eight-inch board with a hollow shaved in it as in sketch on the side of the frame. Now take a five-foot two-by-four and make a hand hold on one end and in the opposite end bore a hole. Slip this lever between the two top pieces and bolt the lower end to the bottom crosspiece. Board up the open corner space as shown in the illustration. Next make a chute leading to this trap and drive the hogs in. They will try to get through the stanchion and can easily be caught by shutting the lever so as to catch the hog just in front of the fore legs. Then insert a bolt behind the lever and he is held for ringing. It takes two to work it, but there is no chasing or holding to be done. M. L. Thomson.

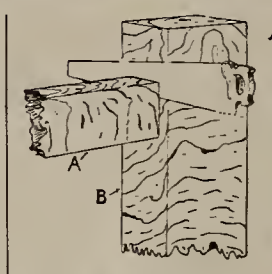


To Make Everlasting Brace Post

This post is my own getup and is the best post I have seen. The post and brace are all made together and the brace-wing runs to within one foot of top of post. The wing should have holes made through it by putting in iron or wooden pins in molding; these are later removed, leaving holes so fence can be put around post. In making a post the first thing is to get four boards ten inches by four feet. In the board (A) that is to make the side next the brace-wing, cut out an opening five inches wide and as high as brace comes. Then nail on two side pieces, triangle shaped, to make a mold for the brace-wing. Dig a hole three feet by one foot square for the post. Then dig a ditch eighteen inches deep and about four feet long. The ground acts as a form below the ground. Fill up even with the top of the ground with concrete before placing on the form for the above-ground parts. There must be an iron or gas pipe put in the center of the post; be sure to do this—or a wire will do.

I have on my farm eighteen of these posts and they are just fine. I can put up two a day. They are much cheaper than wood. I use a good many stone below the ground and some in box above ground: but don't let them come against the side of the box. I have put on two fence-stretchers on a hundred-rod pull and can't pull the post out.

The diagram shows finished post at left—at right it shows mold (A) for side of post next brace-wing, with dotted lines indicating where triangular molds for side of brace-wing are nailed. Fred McNeil.

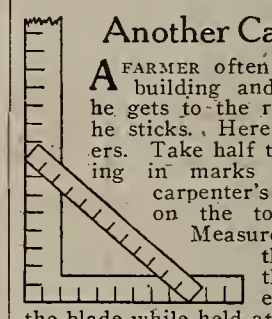


A Useful "Kink"

I have seen this used by even expert mechanics. We often need to make a good joint, but have no miter box. Here is a way to do this illustrated on a mortise and tenon.

Cut the shoulder on the tenon by your eye as nearly square as possible. Leave the stick A to be cut long enough to allow for the fitting. Fit the mortise and drive in the tenon till the longest of the sides, which will be uneven, touches the stick B. Now take the saw and, laying it flat against B as shown, saw down to the tenon. Do this on all sides where it does not fit, driving in the tenon each time. In one or two cuttings you will have a cabinet-maker's joint. If the saw has much set, slip a piece of tin behind it to keep it from marring the face of the stick (B) if you are doing fine work.

You can use this in cutting one board against another as well as for mortising, and here it is much simpler, as all you have to do is to hold the boards firm and make one cut. Carl. Churchill.



Another Carpenter "Kink"

A farmer often wishes to do a little building and all goes right until he gets to the roof. Here sometimes he sticks. Here is a way to cut rafters. Take half the width of the building in marks on the blade of a carpenter's square and the rise on the tongue of the square. Measure across from one to the other and you have the length of the rafters. By marking along the blade while held at these figures you may get the bevel for the lower end of the rafter to fit on the plate, and on the tongue may be marked the bevel for top ends. In getting this length we are working on an inch scale and inches count feet and twelfths count inches. All pitches may be obtained thus. Just take half the width of the building on the blade and the rise of roof on tongue and measure across and you have it.

"Mex."

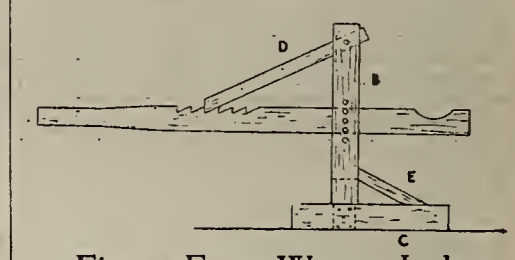


Figure-Four Wagon-Jack

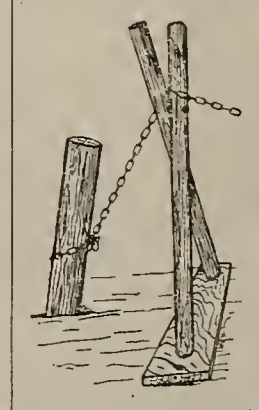
For lever (A) take a two-by-four five and a half feet long. Shave out a place for axle as illustrated and bore hole for bolt fourteen inches from axle end. For upright (B) take a three-by-four twenty-eight inches long. Cut a two-inch slot in it to within eight inches of the bottom. For C use a four-by-four two feet long. Set B into mortise and nail or bolt it; the longer end of C goes out under axle. For D use a two-by-two two feet long. Brace E is bolted or nailed in. The lever is placed in the slot in B at any height suitable to the vehicle in hand and supported by a bolt or iron pin. This jack, made of tough wood, is sufficiently strong to raise a heavy road-wagon and it will not allow the vehicle to run forward.

Fred Glesenkamp.

A Way to Blanch Lettuce

When the heads are about grown, cover with a piece of cloth. On this spread dirt to the depth of an inch or more. Let it remain thus from three to five days, at the end of which time the heads will be white and tender. To prepare for use, wash in cold water. Let stand in water or on ice about one hour to make crisp.

J. P. Childress.



Handy Post-Puller

Take two round poles about four and one half inches in diameter and seven feet long. Cross the poles about half a foot from the smaller end and bolt them together. Nail an eight-inch tough board on the bottoms of the poles for a footing. Set the puller against the post with the bottom about two or three feet from the post; then fasten the chain around the post near the ground and bring it up through the fork and fasten to the doubletree. Always drive the team toward the next post. With a team and man I pulled with this one hundred posts in one hour, and eleven posts in four minutes when trying to see what we could do.

G. J. Schuster.

Headwork winners for September 25th will be announced in November 10th issue.

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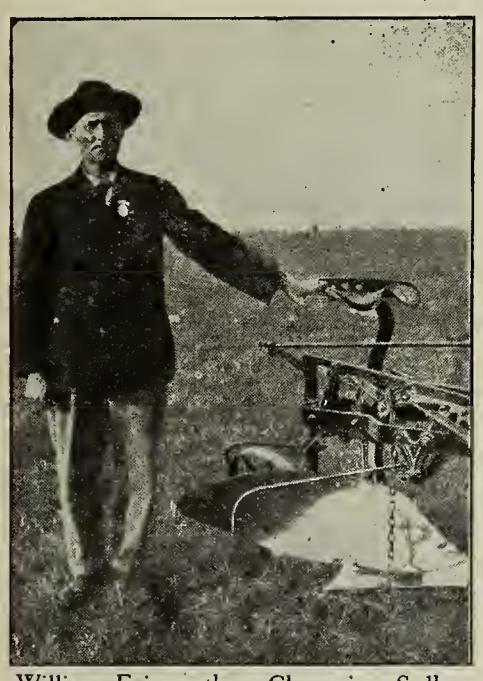
Farm Notes

What a Plowing Match Does for Wheatland

IN THIS day when the farm lad is attracted by the excitement and false show of apparent opportunities in city life and yearns to leave the farm, the question is constantly asked: "What can be done to make farming more attractive for the young blood, as well as less burdensome for the older people?" One answer—and by no means one of little consequence—is "Found some agricultural institution in communities which will serve to unite the farmers into closer relationship and give an impetus to general agriculture." That is just what the progressive farmers of Wheatland Township, Will County, Illinois, did some thirty years ago. They instituted an annual plowing match, and the benefits reaped therefrom have been far-reaching indeed.



William Fairweather, Champion Sulky Plowman of the United States

The annual Wheatland Plowing Match is a strictly educational and social affair. Farmers congregate from adjoining townships and counties to contend. The competition is good natured, and stimulates a perseverence, skill and carefulness that not only exists at the match, but becomes so imbedded in the very nature of the contestants that these characteristics crop out continually in other farm operations to the benefit of the entire community.

Aside from this educational advantage, the social features of such matches far exceed those of a fair and vie with family reunions in this respect. Relatives come from different townships, and city cousins mark the day of the plowing match as the one day for serious jollification, getting together for a family dinner in picnic style, and spending the afternoon in visiting. Nowhere has the writer witnessed such an environment of intimacy, good fellowship and social sincerity.

The match was begun in 1877. Not many years after that date Wheatland became known as one of the most fertile, the most beautiful and best-farmed townships in the state—in large part due to the influence of the plowing match.

The thirty-third annual match was held September 17th on the farm of F. W. Culver, near Plainfield, Illinois. Besides the plowing matches, the usual grain show and the ladies' exhibit of baked goods and handicraft added their educational and interesting features. The ladies served a chicken dinner.

Six thousand visitors witnessed the usual marvelous plowing that results from such keen and skilled competition. To see a half acre of soil turned up in furrows so straight that the eye could not detect the slightest variation throughout their length; to see a stubble field plowed with trash so neatly covered; to see round even furrows of such excellent conformation, only suggested silently the accomplishments possible with the plow when care and study are applied to it. Even the work of the thirteen-year-old boys would put to shame the plowing on ninety-nine per cent. of the farms in the country. Few appreciate the practical benefits or even the possibilities of fine plowing. To get best results the plow must be understood, and a study of its work must be made in varying soils, soil conditions and at varying depths. The plow is by no means the simple machine that it looks, as every one realized who saw those Wheatland farmers use it to create real works or art.

If more communities would institute enterprises with the educational and social value, and with the ideals and sincerity of the Wheatland Plowing Match, a long step would be taken in the advancement of those communities and their people.

CHESTER O. REED.

Don't Desert the Quail

IT IS high time that the farmers of Ohio and other states, I presume, are saving, to the state, the quail within its borders that are so valuable an asset to every farm. The quail is harmless. As a destroyer of noxious insects in summer and as a gleaner of waste grain and weed seeds during the rest of the year, it has no equal.

Public sentiment against shooting as a sport is gaining ground very rapidly. Every year adds a large number of farmers to the list that prohibit all hunting on their farms.

It is up to us to protect the quail. Let's do it.

H. W. WEISGERBER.

Horses for the Market

[CONTINUED FROM PAGE 5]

who would buy such an animal for a brood mare, he bred her to a stallion whose disposition was as bad as hers. Thus he had the material for a pretty bad inheritance on both sides.

The result was a filly remarkably handsome and with promise of some speed. The carpenter and his wife made a great pet of her and for three years she showed no ill temper worth mentioning; there was nothing, in fact, to rouse it. Then she was put out to a "breaker" of the old school to be broken to harness. The breaker, as was learned later, had nothing but trouble with her; trouble, too, of so serious a kind that he acquired a great respect for her teeth and heels. In due time, however, he returned her "nicely broken," as he said. But having, in some remote corner of his make-up, something which he probably considered a conscience and possibly unwilling for the earpenter to die unwarned, he added that "when you use her, you want to look out sharp, for there's lots of gimp in her." Had the carpenter been more familiar with the delicate circumlocutions of the "profession," he might have guessed the truth; as it was, he intimated that no amount of "gimp" was too much for him and announced that the next day he was going to "give the natives a surprise party." He did. No sooner had he got his filly hooked up and taken his seat on the gig than she started to run and kick. The carpenter hurled himself out backward, as the quickest way of quitting the combination, and the gig was soon a mess of kindling wood. When the filly was caught, nearly a mile away, she had divested herself of every strap of harness, even to the bridle—"kicked herself stark naked" as the carpenter told me; a performance as extraordinary as it was immodest.

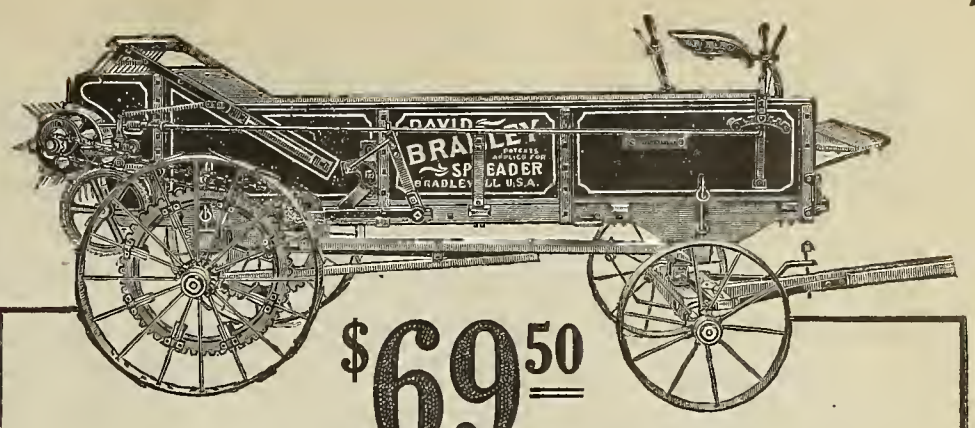
This episode and the fact that the filly had things all her own way seemed to rouse all the latent devil in her nature. She was like a fiend incarnate and bit and kicked to such an extent that it was with great difficulty she could be fed and cared for. A few days later the carpenter asked me if I would take her and "get her to going gentle." My heart sank at the proposal, but my reputation as a horseman was at stake, so I named my price—a good stiff one—which was at once agreed to. I had treated some colts that were rather bad, but had not seen so extreme a case as this, and she remains on record as the worst horse I ever handled.

She was brought to my barn by three men, one on each side, with long ropes attached to her bridle and one behind with a whip. Her owner followed at a safe distance. His affection for his erstwhile pet had waned and he spoke of his recent back-somersault and of the filly herself in terms unfit for publication.

The methods by which this filly was broken and rendered gentle in harness and stable would require too long a description for this chapter. In fact, the means employed have been largely covered in previous articles, particularly that of April 10th. It is sufficient to say here that we did break her and sent her home, a safe animal to use and care for.

Now all this trouble came from a disposition resulting from bad judgment in the selection of parents. Even if such colts can be subdued and made useful, is it worth while to raise them? I think all will agree with me that it is not.

EDITOR'S NOTE—This completes Mr. Buffum's series on the science of horsemanship. In an early issue he will begin a discussion of "Farm Leaks and Profits."



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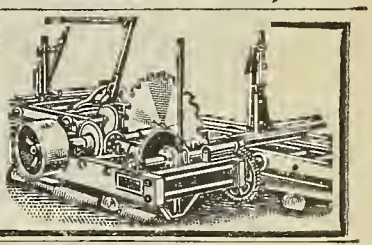

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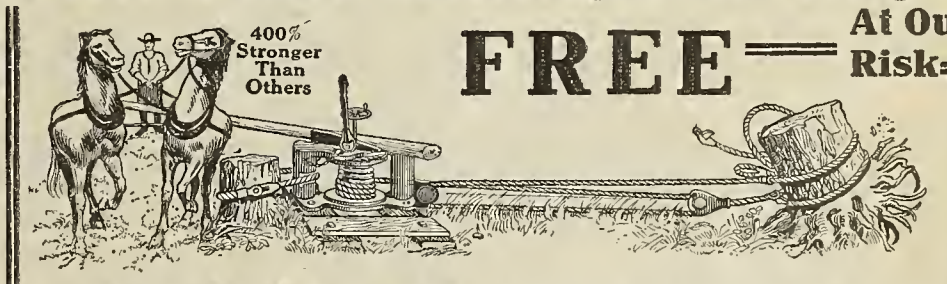

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Gardening

By T. Greiner

Soil for Winter Gardening

One of the things that we must look out for at this time is that we have the soil needed during our operations in the greenhouse in winter or in hotbeds in early spring. I do not like to use the old soil over again. It is liable to be infected with damping off and other fungous diseases that affect plants under glass. I had that once-used soil thrown out long ago. Some of my big onions are now spread out on the empty benches to cure. They will be disposed of shortly. As soon as they are out, the greenhouse will be disinfected by means of burning sulphur inside of the closed building. That will help some in killing the disease spores as well as insect life that may be present in the house.

My preference would be some old compost made of rotted sods, some muck and a little old manure, occasionally turned and well weathered. As I do not have this just now, I must get soil fresh from a rich garden-spot, sand fresh from the river-side and some old muck if I can get it. I like muck especially for putting on the surface of the beds or benches and for covering seeds. If I can not get it otherwise for these purposes, I buy it by the bushel. Its use insures the prompt germination of the seeds. I often wish I had an acre or even part of an acre of good muck land, preferably rather sandy, but muck anyway. When we have to buy it by the bushel, in growing plants, we learn to appreciate it.

Gardeners of the past generation, like Peter Henderson, made free use of bone-meal. We have almost lost sight of this good and useful fertilizing material. Modern agriculture has learned to rely more largely, almost exclusively, on certain standard chemicals, and bone-meal is hardly included among the generally recognized ones. In greenhouse work I believe it is eminently useful, and we might use it again more freely as one of the ingredients to add to our bench and hotbed soils. It furnishes the needed nitrogen in a much safer form than in organic manures, although what we find in rotted sods is all right. Manufactured or chemical manures are not likely to carry the germs of diseases. I also apply some lime to my beds and mix this well with the soil.

This job of laying in our stock of soil to be used either in the winter in greenhouses or in early spring in hotbeds should be attended to at once. Winter sometimes comes on early and suddenly in the Northern states. We have had to dig up frozen ground before this, when we were found negligent in this respect. It is an awkard predicament, to be found without a full supply of the soil needed in these plant-growing operations after winter has once closed in on us.

Plow the Garden

When I start with the plow for the celery-patch or for other garden-spots as I frequently do these days, I am always followed by a big flock of chickens and old hens. They know from experience what is in store for them there. They follow in the furrow closely behind the plow, and woe to the hapless worm or bug that is brought to view or uncovered so that the fowls can get at it by scratching. It is usually the more harmless earthworm that is found and devoured in large numbers; but occasionally I see the fowls pick up a cutworm or white grub, things that we are very glad to get rid of. The earthworm, while in the ground, may not do us any damage, but when in the interior of the chicken, hen or duck, it will do us some good by its transformation into meat or eggs. Thus plowing the garden helps to feed the flock, without extra cost. It helps to reduce the numbers of cutworms, grubs, wireworms and probably other enemies of our garden crops.

I would plow my garden-patches after the crops are removed even for this purpose alone. But in doing it I have still other objects, really the main objects, in view. The old garden-patches overrun with tall weeds look bad. The weeds are ripening and scattering seeds by the million. Sometimes I cut the tall growths with a scythe before plowing. At any rate, I try to plow the weeds and rubbish under so that nothing but a clean surface is left. The plow is my favorite weed-killer and garden-cleaner. It does thorough work. I hold it always in readiness, from late summer when the first celery is to be hilled up or the first garden crops are cleared off some patch, until the final freeze-up in November or December. Thus I do this plowing a little at a time, just as I have the chance. It does not seem to require much effort. It helps. It pleases our fowls and the general results are good. My garden now looks as clean as it did at any time during the season. The bulk of the weed growth is adding humus to the soil, making it richer, warmer, moister. And I will not have to fight so many weeds next year, nor so many insects.

Look Out for Next Season

I always want as early a garden as I can get. So I make my first preparations for next spring this fall. It may not take a big spot in the garden to give us all we want. At the first opening of spring we can only plant a few things, and these the very hardiest, such as peas, lettuce, onions, radishes and perhaps beets and carrots. A single row even of each of these will give us the early start and the early green things we want. So I pick out as warm and high and dry spot as I have available just before winter, and if it is not as rich as I think it ought to be, I give it a coat of old manure or compost now, and then plow the spot, leaving it in narrow ridges so that it will have a good chance to freeze and thaw and dry out early in spring.

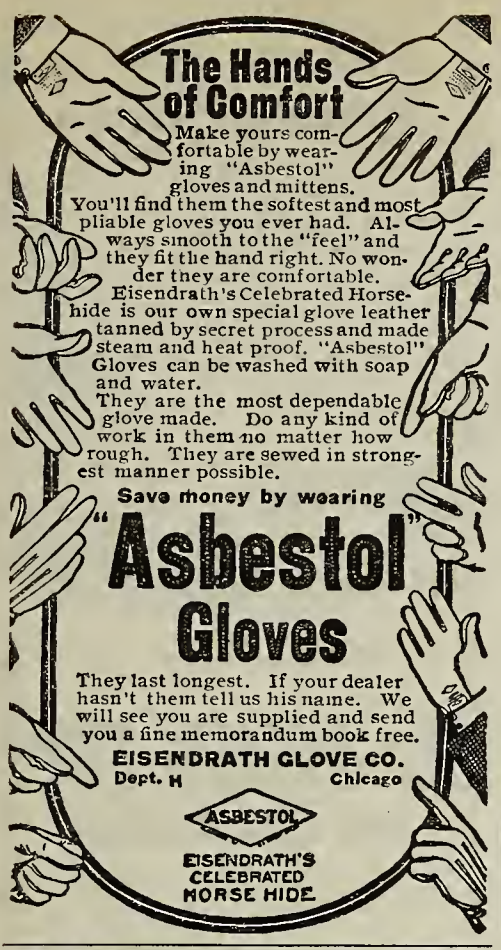
Such a patch will be ready for working perhaps several weeks before the rest of the garden is. Then when it is in shape for planting, I just plow the ridges down, harrow thoroughly, the last time with the Meeker pulverizer, or else rake it over by hand and sow my radishes, beets, carrots, onions, lettuce, cabbage-plants, etc., by hand or seed-drill, possibly not more than a row of each for this first planting, except the radishes, of which we can stand several, and also set a row of greenhouse-grown lettuce and early cabbage-plants. Nor should we forget a row or two of Alaska pea or, better, Improved Alaska, which is larger and more productive, and perhaps a row of Early Ohio potato, so as to have a few early messes of all these vegetables. I usually open the furrows for planting the peas and potatoes with the single-horse plow at the time of getting this early patch ready for these various things. The larger patch on which I this year made a failure with melons and other cucurbits, will be handled in the same way, by laying off, with the plow, in high ridges.

The Fight Against Wire and Cutworms

A reader complains to me about the damage that wireworms and grubs did to his tomato and cabbage plants during May and June. He asks how he can prevent their depredations next season. That is easy. These enemies thrive in neglected gardens. Cutworms winter near grassy margins, on perennial growths, etc. They can not live in clean and frequently disturbed ground. The plow, as already stated, brings them up to the surface where fowls and other birds can get them. Wireworms winter in the pupa state, in a sort of nest made of earth, in the ground. Plowing just before winter will break up the nests and bring the pupæ up to the surface, where they are exposed to frost and birds. The few cutworms that escape the dangers of frequently disturbed soil can be poisoned or hunted up and destroyed by hand when they begin their depredations next spring. Plowing is my main dependence against both pests.

Handle With Care

A recent government bulletin, speaking of the causes of decay in stored cabbages, says that the organisms which cause leaf blight, soft rot and therefore decay in cabbages while held in storage, gain access to the leaf through bruises and injuries due to careless handling, and through leaves infected with black rot. It makes the assertion that careful handling in harvesting and the sorting out all bruised and infected heads will do much toward the prevention of extensive loss during storage. This is true also of other vegetables, notably winter squashes, pumpkins and sweet potatoes. In the hurry of harvest-time we are often tempted to toss these vegetables about and into their respective receptacles or bins. I myself have often been at fault in this respect. We should handle these things and all fruits, too, rather gingerly, almost as we would eggs. Bruises invariably lead to decay, even in more rugged vegetables like beets and carrots. "Handle with care" is a good motto.



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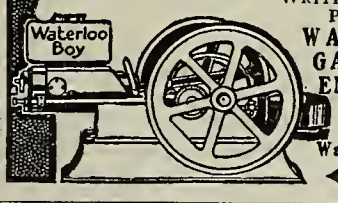

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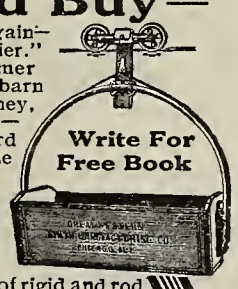

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The Adventures of Sir Hubert

By N. T. Frame

It was while assisting vehemently at a conference of orchardists who were arguing the fine points of their craft, that Sir Hubert first met the would-be orchardist who was destined to play the part of Sancho Panza in these Adventures in the Field of Orchardry.

Naturally and properly Mr. Would-Be Orchardist was impressed with the words of Sir Hubert, and wondered whether he might not so ingratiate himself into the good offices of this man as to stand him well in hand in the matter of his investments as an orchardist. After several compliments to him had been deftly interposed by the stranger, Sir Hubert was readily persuaded to set forth with Mr. Would-Be Orchardist on a tour of inspection and study of orchards and orchard practices.

In the first few orchards to which their journey took them, they not only learned much valuable information about methods of combating San Jose scale, but they also met unexpected adventure.

The infamous San Jose scale is a little insect not so large as a pin head, in fact, a louse, which lives by sucking the juices of the tree. The young louse, during the first few days, may crawl several feet before it settles down and, becoming anchored to the bark, forms its protective scale. During this time it may crawl from one infested tree to another where branches rub, or it may crawl into the claws of a bird and be carried to a new tree. Its offspring will shortly be sufficiently numerous to suck enough sap out of the particular branch on which they are anchored to cause it to die. Such infestation in a tree generally first appears in the top and on outer branches. Unless spraying is done, the insects will spread over the whole tree and kill it. Half-hearted spraying may save the life of the tree, but will not prevent loss of vitality; for unless every particle of the bark is covered with the liquid it is not possible to kill every scale.

Sir Hubert and his companion were conversing concerning this very matter of thorough spraying when they rode into the premises of Mr. Orchard Poor. That gentleman, after many years of work with inadequate equipment, was at last in the market for a large spraying outfit.

The competition for his trade had finally simmered down to two power sprayers and two sprays—one a soluble oil, the other a concentrated lime-sulphur. While arguing the relative merits of the machines and the sprays, the agent representing one of the machines and the agent for the lime-sulphur had issued a duel challenge to the other to settle the controversy by a field test in Mr. Orchard Poor's orchard. This challenge had been accepted and Sir Hubert and Mr. Would-Be Orchardist arrived just in time to witness this contest.

After a few minutes of watching, Sir Hubert thought he noticed that the man holding the ten-foot bamboo spray rod with nozzles at its end, through which the soluble oil was being sprayed, stood so close to the tree that his nozzles were held inside the tip ends of the outer branches.

Sir Hubert knew that under such conditions reinfestation would promptly occur on the trees so improperly sprayed, irrespective of the killing power of the spray material where accurately applied. Dismounting and advancing to the demonstrators, he held up a warning hand and cried "Hold!" Both sprayers promptly cut off the flow of spray by closing their stopcocks, while the crowd pressed close to learn the trouble.

"Mr. Soluble Oil," said he, "you must go over your trees again—I find that your nozzles were so close to the tree that many of the outer twigs were not sprayed at all. In fairness to the material you are using and in justice to the trees whose lives and reputations are at stake I demand that you respray those trees; Mr. Lime-Sulphur doing the same to his, if he so desires."

Now, Mr. Lime-Sulphur had himself noticed the negligent manner in which the soluble oil man had been holding his spray rod. The constantly increasing prospects for his own victory had naturally pleased him. Therefore, this unexpected interference by Sir Hubert the more completely upset him. "What have you to do with this? Who appointed you the umpire?" he demanded in anger, and added, "Our agreement calls for one application. The trees have been sprayed once and that's all we are going to do to them. You had better go along about your own business."

"Whatever pertains to the good name of the fruit industry is my business, friend," replied Sir Hubert. "I can not allow unfairness in such a contest."

Sir Hubert's calm manner still further irritated the lime-sulphur man and he answered, with a sneer, "If you interfere further with me, I shall thresh you." The words had hardly reached his ears before Sir Hubert started to answer this challenge to personal combat, and advanced directly into a blinding mist of spray, suddenly spurting from the end of the sprayer's rod, on his opening of the stopcock. Sir Hubert recoiled and tried again to advance, but the caustic spray was too severe in his eyes and nostrils.

Mr. Lime-Sulphur was just ready to again taunt his opponent when he noticed that the pressure was dropping, and turning, saw that Mr. Would-Be Orchardist had come to the rescue of the Knight of the Orchards by shutting off the engine.

Mr. Lime-Sulphur's anger had been assuaged by the laughter which had greeted his "spraying" of Sir Hubert, and fearing an attack from the rear by his opponent's reinforcements and also noting the determination in Sir Hubert's face which showed in spite of the yellow stains from the drops of spray which bespattered it, he dropped his spray rod and ran.

Sir Hubert would have pursued, but Mr. Would-Be Orchardist dissuaded him. Having removed as best they could the spray stains, they again joined as onlookers while Mr. Soluble Oil "touched up" the branches not hit by him at first; after which they decided it time to proceed on their journey so as to reach a lodging-place for the night.

Before getting out of earshot, however, they again heard the explosions of the second engine, telling them that both demonstrators were once more at work carrying out the tests. Sir Hubert was pleased to feel that the results would be a more nearly accurate comparison than if he had overlooked the opportunity to correct an error; and these results as finally published some months later gave full confirmation to his actions at the field test in upholding his reputation as a knight sworn to avenge wrongdoing on the fields of orchardry.

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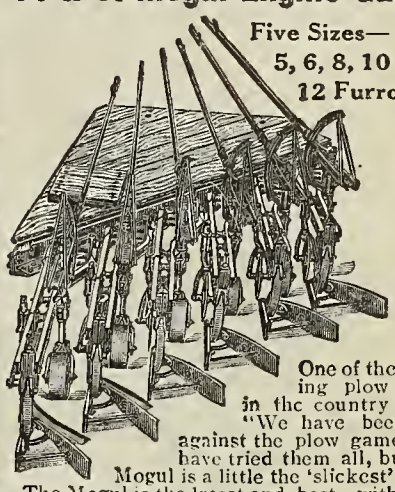

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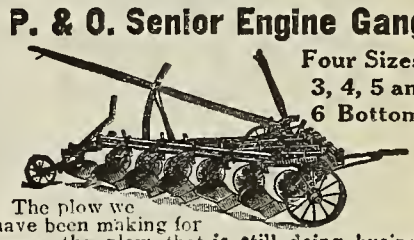

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Poultry-Raising

Feeding for Eggs

Did you ever stop to think that the most expensive poultry-feed is that which produces no eggs? No matter what the food is composed of it cheapens in proportion to the number of eggs which you get by feeding it. I find that with very many keeping hens there is a temptation to feed that which costs the least money. The best food for laying hens is by no means the costliest feed that you can get. A good many who obtain the largest number of eggs feed less expensive food than those who get very few or no eggs at all. One of the main reasons why farmers get so few eggs in late fall and winter is that they keep their hens too steadily on a grain diet.

All poultry should have green food in cold weather and this costs practically nothing on the farm; but not one half the farm poultry get it. Feeding thus, with no variety, is what I call expensive feeding. It produces no results, and it would be expensive if it did. A less amount of grain and some vegetable food would be just as good. Hens on the town or city lot are handled differently. The owner has scraps and parings from the house and buys all his grain. Therefore, he figures more closely. Town poultry-keepers generally get eggs in winter. They have no better hens than the farmer; their flock has little range to give them vigor. There is no place like the farm to keep poultry; but the farmer must study the feed question more closely. When I buy poultry-feed, I get that which experience shows the best for the egg-basket, paying little attention to the cost.

V. M. Couch.

Comfort, Drugs and Scratching

I want to impress upon my friends that if they are to get eggs this winter the fowls must be protected from rain and snow storms. Cold weather does not stop laying, but allowing hens to get soaked by cold rain or wade in snow does. Remember that fowls have not sense enough to stay in out of the rain or snow, and for that reason must be compelled to. I do not allow my hens to go outside of their sheds in stormy weather during the late fall and winter, and I get eggs every day. I feed no fancy or high-priced feeds, but just plain stuff made bulky to prevent the hens becoming clogged with fat; and they go through the winter in fine condition. Don't feed drugs or drugged foods at any time. It is the worst sort of folly. Most of the patent foods and egg foods are merely cheap meals mixed together and seasoned with a small quantity of cheap drugs. I have had some of them analyzed, and in every case their actual feeding value was far below that of plain wheat and corn. Don't waste money on them in the hope that they will force your hens to lay. Good care, with plenty of plain food and water and oyster-shell, is better than all the drugged stuff ever put up. Give your hens as good care as a successful dairyman gives his cows and they will give a good account of themselves.

If your fowls are young, active and full of life and if a snow storm should confine them to their house and scratching-shed, scatter a good lot of wheat or broken corn in plenty of straw to keep them busy. Young, active pullets are much like children; they must have something to do to keep them out of mischief. If they can find anything to eat by scratching, they will scratch. If they have nothing to do while shut in, they will get into all sorts of mischief, such as feather-pulling, etc. A bunch of year-old hens are steadier than young birds and do not care to scratch much, and if compelled, as is often advised, to scratch most of their living out of litter, they will lay very few eggs.

Fred Grundy.

Feeding Poultry in Fall and Winter

It is the custom with many to give fowls a warm mash in the morning and a grain ration at night. The idea seems to be that the warm mash warms the fowls up and starts them out well for the day.

I believe that an increased egg yield follows a reversal of this method. Keep the floors covered during the winter with a litter of straw or leaves. After the fowls have gone to roost scatter their morning ration of grain in this. You will be surprised at the difference in your fowls next morning. Instead of sitting around humped up waiting for the warm mash, they will be busy scratching, warmed through and through by the exercise, and ready to go to work early instead of sitting around in a "dopey" kind of way as is often the case after a hot ration on a cold morning. Get them to warm themselves up scratching. It's Nature's way. There is none better.

Feed the warm mash just before roosting-time. It's like sending the fowls to bed with a hot flatiron to keep them warm. It assists the circulation through the night and gets the birds well toward morning without a chill.

Orin Edson Crooker.

Gather the Leaves

The poultry-raiser should gather and store a bountiful supply of fallen leaves for winter use. They are more serviceable in the chicken-house than straw and cost nothing but time. Store them in a dry place where they can be kept stirred. No matter how dry they may seem when gathered they contain enough moisture to cause mildew if packed tightly in barrels or bags.

Once a week through the winter cover the floors of the hen-houses with a foot of leaves. Scatter grain among them to reward the diligence of your fowls. A busy hen is a contented hen, and contented hens fill the egg-basket.

In a week this mass of leaves will be trodden down and broken up fine and so mixed with droppings as to be a valuable fertilizer, which will produce a rich black loam and retain moisture in the soil when most needed. The manufacture of plant mold from fallen leaves is Nature's own method of replenishing the soil. Thus one not only keeps the poultry busy and contented, but also calls Nature to aid in bringing up the fertility of the garden patch.

O. E. C.

One Woman's Turkey Fattening

I have found it quite profitable to cook up small Irish and sweet potatoes for fattening turkeys. I use a ten-gallon iron kettle. The potatoes are washed, then boiled soft, and while hot, meal and wheat-bran are stirred in to make a thick mush. Sometimes a gallon of oats is added. The hens are fed of this feed and I think I can note an increased egg yield as a result. Long troughs are made by nailing two planks together in a V shape and tacking on end pieces. The feed is allowed to cool, and the sixty-odd head of turks will clean up a troughful night and morning. Pumpkins, turnips, parsnips, etc., are used in the same manner. A week or two before selling the turkeys, corn is fed twice a day and the mash feed once a day. The corn tends to make the flesh solid and increases the weight. During really cold weather I add bits of tallow or scraps of meat to the mash. It does not pay to sell a poor fowl of any kind, much less a poor turkey.

Mrs. D. B. P.

The barn is no hen-roost. You know that. Why not live up to what you know?

Fall is a good time to begin with poultry. You can buy young hens now that should begin to lay in a few weeks.

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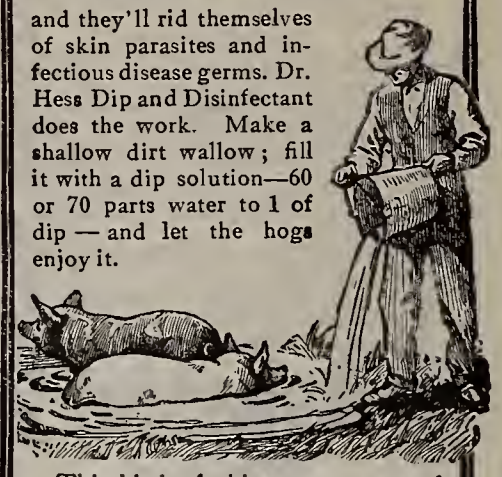

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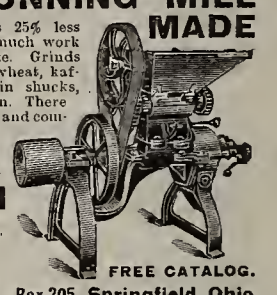

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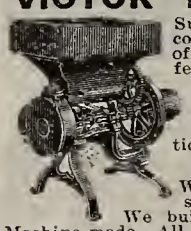

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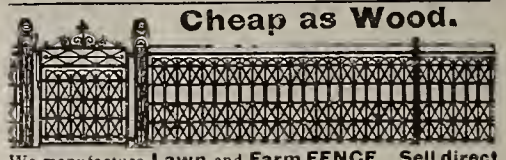

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Live Stock and Dairy

Feeding Lambs—The Cost and Profit

I LIKE now and then to find an appropriate text for these sermons on lambs. Colonel Roosevelt's speech at Denver on the twenty-ninth of last August furnishes me with the following: "The farmer is a good citizen if he leaves his farm improved and not impaired for his children, and a bad citizen if he skins the land in his own selfish interest." He who feeds fat lambs and makes good use of their fertilizing abilities must in that respect then be a good citizen.

It is not easy to tell accurately the cost and profits of feeding farm animals because of the constant fluctuations in the values of feeding-stuffs and of the animals when marketed. I have tried to overcome these difficulties by finding the average values of these items during the past ten years. The average prices of lambs in the principal markets were easily got at. From 1900 to 1910 they have ranged from four dollars and fifty cents to nine dollars per hundred pounds. The average is six dollars and fifty cents for all classes of fat lambs. During the past month (August) the prices have ranged from five dollars and fifty cents to seven dollars and eighty cents for domestic lambs.

Of feeding-stuffs the two most costly, but at the same time the most valuable, for lambs are linseed cake or meal and bran. The average price of the former has been two dollars (but is rising) and of the latter one dollar and twenty cents per hundred pounds. In Farmers' Bulletin No. 22 it is stated that cow-peas, containing 16.6 per cent. of protein, and soy-bean meal, 35.9 per cent.—far cheaper than linseed or bran and yet containing as high a percentage of feeding constituents—may be used to advantage in their place. I have had no experience in feeding these to sheep, but I have learned by experience that the chemical analysis of a feeding substance does not always exactly indicate its usefulness. Anything recommended by Doctor Allen, who is assistant director of the office of experiment stations and author of this bulletin, is worthy of the highest consideration. Yet there seems to be some peculiar property unnamed by science in linseed, bran and turnips which specially fit them for the growth and fattening of sheep and lambs, and for maintaining the fertility of the soil. They certainly correct the heating and constipating tendencies of corn and other grain rations. Maybe cow-peas and soy-bean meal possess the same properties.

The average cost for feeding purposes of oats may be taken at one dollar, of wheat at one dollar and forty cents and of corn at seventy-five cents per hundred pounds.

The forage crops best suited to the feeding of sheep are red clover, rape, rye, vetches and oats and peas sown together. Every farmer must judge which of them is best under his conditions. Their value, whether consumed by folding on the ground where grown or carried off for soiling on the pastures or for feeding in the yards, is about the same—from fifteen to twenty dollars per acre.

As regards the root crops—turnips, mangel-wurzels and beets—their value for sheep-feed can not be estimated by chemical analysis or from the cost of growing them, which is about equal to that of corn. The great bulk of the sheep not only reared, but ripened for market in England are fed on turnips. The linseed-cake which is given is almost as much for the good of the soil as for that of the sheep and what hay they get while on turnips is usually mixed with a good deal of oat and pea straw. Much of this country is well adapted for the growth of turnips, and but for the fact that they require considerable labor there is no reason why they should not be grown. They certainly pay better than any other crop as a fall and winter sheep-food.

So great a number of experiments are on record made here and in Europe by individual experts and at experimental stations as to the amount of food consumed by ewes and lambs in the various stages of their growth, that a reasonably close estimate on the subject can be arrived at. The following figures give, I believe, a fair statement of the amounts; they are, however, always open to local and market modifications.

The Ewes

During September while preparing for breeding, and October while the ram is with them, ewes will require a grain ration of a pound a day. If the pasture is burnt up or exhausted, give as large an amount of clover-hay and green forage

It Costs About $2.75 to Raise Him and He Sells for $7.80

as they will clean up, and a few sliced turnips. Cost per ewe.....$1.20

From early in November up to lambing in February and part of March, a half pound ration of grain and meal, one and one half pounds of hay and a few sliced roots. Cost per ewe.....$1.00

From birth of lambs to weaning, about four months, a grain and meal ration of one and one half to two pounds, and while in the yards one and one half pounds of hay and as much sliced roots, silage or green fodder as they will eat with relish. When turned out onto pasture, the grain alone will be needed. Cost per ewe.....$2.50

Total cost of feed for each ewe, ten months $4.70

During July and August they will be on the stubbles and rough pastures, where their scavenger work among the weeds and their fertilizing abilities will pay for their keep.

The Spring Lambs

The cost of feeding these lambs intended for the spring (Easter) markets is included in that of their dams, with the exception of their grain ration of from one eighth to something less than one half pound, and the small amount of hay, roots and forage they will consume. Total cost of feed, each lamb.....$ .50

The Fall and Winter Lambs

Being with their dams from birth to weaning, for the greater part of the time on pastures or folded on green crops, their extra food during that time will not be likely to exceed in cost that given above for the spring lambs.....$ .50

For the ninety days succeeding weaning, while on pasture or folded on rape or clover with a ration of grain and meal, one half pound, their feed will cost ..... $ .75

From then on to time of marketing in November and December, if fed, as suggested in the last paper on the care of this class of lambs, on all they will clean up of the best of everything, their feed will cost $1.50

Total cost of feed, each lamb.....$2.75

Summary of Cost of Year's Feed

Feed, 100 ewes, $4.70 each.....	$470.00
Feed, 60 spring lambs, $ .50 each..	30.00
Feed, 60 fall lambs, $2.75 each....	165.00
Total cost feed for flock.....	$665.00

No allowance is here made for labor, incidentals or marketing because each farmer must judge for himself the value of the labor bestowed, and incidentals are so varied and uncertain that they will best be footed up after the last check is received from the last buyer of ewe or lamb, for he might do some grafting and so cause the worst "incidental" of all. As regards labor, a good stout lad can easily attend to the feeding of one hundred ewes with their lambs, but he must be always under the watchful eye of a good shepherd and above all be good-natured, fond of animals and very quiet.

In estimating returns, probabilities have to be dealt with. We will suppose, then, that forty out of the one hundred ewes have to be drafted as incompetent mothers or for other reasons and disposed of. Probably ten of the first lot can be found nearly fit to send to market with the lambs in spring. They should all be carefully looked through a month before that time, and those best fitted to go and least desired at home be dried off—if not already dry—and pushed forward with all they can eat. The rest of the draft from the first (spring) lot can be put with the second lot of ewes and disposed of when fit. In making this selection of drafts it should be remembered that a five-year-old fat ewe sells better than one of seven or eight years; and that an older ewe with a reputation as a good breeder and mother may do good work in this lamb business up to ten years and even more. This specially applies to Shropshires. All these drafted ewes clipped, weigh on an average one hundred and seventy-five pounds, worth at the lowest three dollars and fifty cents per hundred, and should have clipped seven pounds of wool worth at least thirteen cents. This will realize for these forty discards.....$280.00

The sixty ewes retained for the flock, being good milkers, good mothers and sound in health and by rights in better condition than when bought, are certainly worth the five dollars per head which was paid for them. They also should have yielded seven pounds of wool, which at thirteen cents amounts to ninety-one cents per head or a total of fifty-four dollars and sixty cents for wool and three hundred dollars as their flock value, totaling $354.60

Total realized from ewes.....$634.60

To put a value on spring lambs is far more difficult. I have had many joyful surprises caused by receiving checks for them; I can remember no disappointments. There are indications that good prices for high-class lambs have come to stay. This is written at the end of September, an off time for lambs, and yet I see that on the twenty-fifth of this month when there were 182,250 lambs and sheep in Chicago, a number that broke all records, "prices closed firm to fifteen cents higher for fancy fat lambs, and weak for fat sheep, native lambs reaching seven dollars and forty cents." It must be remembered that very choice ones are often picked out, early in the market, at a bulk sum which does not always get reported at the scales. As I have before stated, the average price for all fat lambs for the last ten years has been six dollars and fifty cents per hundred pounds, and I think it safe to put a bulk price of seven dollars on the sixty spring lambs we have for sale, making their total value $420.00

The sixty lambs for fall and winter markets should average one hundred and twenty pounds and be worth six dollars and fifty cents per hundred, making seven dollars and eighty cents per head, and for the sixty.....$468.00

Summary of Costs and Returns

Returns from 100 ewes.....$	634.60
Returns from 60 spring lambs...	420.00
Returns from 60 fall and winter.	468.00
Total returns .....$	1,522.60
First cost of ewes.....$	500.00
Total cost of feed for flock.....	665.00
Total expenses .....$	1,165.00
Profit .....$	357.60
Add value of manure, one fifth cost feed.....	133.00
Total profits .....$	490.60

From this must be deducted cost of labor, marketing and incidentals, which should include loss from deaths, which with these lambs should not be great as they are not subject to many of the diseases of older sheep.

My reasons for crediting the one hundred ewes with raising one hundred and twenty lambs are founded on my own experience and on that of some very reliable authorities. Mr. David Buttar, an eminent Scotch breeder and feeder of thoroughbred Shropshires, writes: "Most of my ewes have two lambs and sometimes three." Mr. T. H. Hutchinson, whose flock of pure-bred Leicesters is known, one may say, over the whole sheep world, says: "I annually put one hundred ewes to the ram and generally average about one and one half lambs to the ewe," and Shrops are usually more prolific than Leicesters. I have always had the same experience as these gentlemen, but, to be safe, I reckon on an increase of only twenty to the hundred.

So far I have given no detailed statement as to the value of sheep as fertilizing agents or how I justify putting the value of their manure at one fifth the cost of their food. The fact that for about eight months of the year they will be either on pasture, where, when the grass fails, they will be soiled with succulents and grain—or else that they will be folded directly on such crops, consolidating, but not rooting or poaching the ground as cattle and hogs will do—has to be considered. And again since a large proportion of the fertilizing elements of manure is contained in the urine, the fact that in folding it is conveyed directly from the sheep to the soil is of great importance. I have tried to avoid in these papers any attempt to give scientific analysis of foodstuffs, but the

[CONCLUDED ON PAGE 12]

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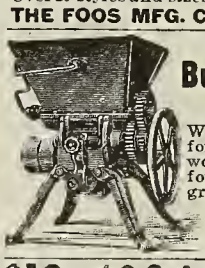

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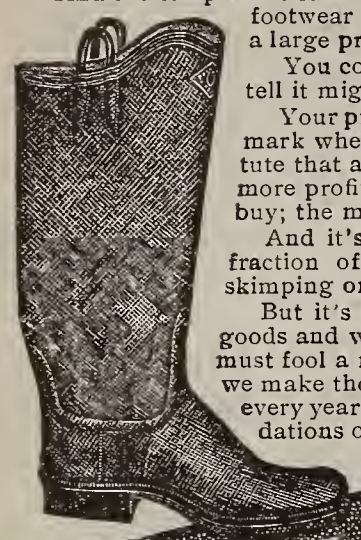

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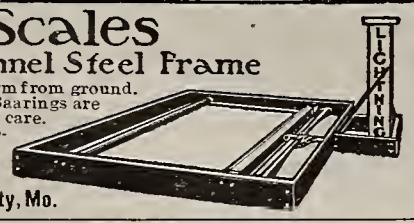

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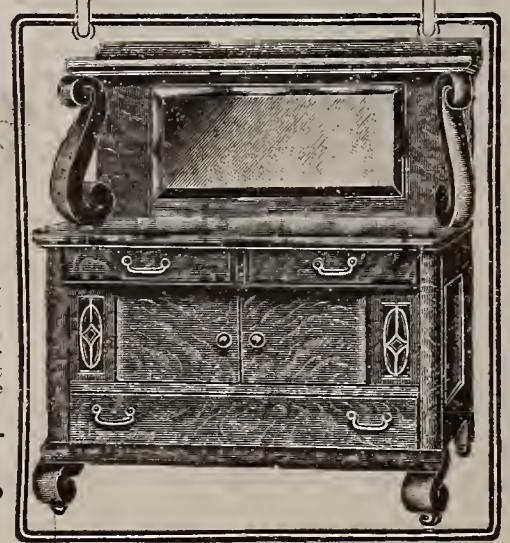


Montgomery Ward & Co.
CHICAGO AND KANSAS CITY

(12)

Live Stock and Dairy

Teat-Plug and Tubes

A SUBSCRIBER in the state of Washington says: "I have a heifer that came fresh last May. Not long after one teat became affected and I had to use a tube to get the milk. The teat has gradually got worse, with lumps and sores inside from the end up to one and one fourth inches or so. It is now hard to insert the tube and the cow has to be securely roped before milking. I have read that, instead of a tube, a teat-plug should be used, and kept in. It would seem that a plug would stretch the end of the teat so much that after it was discontinued the milk would run out of that quarter and waste. Also a cow fighting flies and in a brush logged-off pasture would hurt a teat with a plug in."

Several inquiries similar to this have come in lately, and such trouble is common enough to make it important.

It is apparent in this case that the inevitable has happened. The use of the milk-tube without extreme care and thorough sterilization before each insertion results in the infection of the teat and udder. Even when great care is used the germs present at the end of the teat are conveyed along the lacteal duct by the milk-tube and thus the infection spreads. The teat-plug is used in a case of hard-milking cows where there is a desire to dilate the teat opening, but its use in this case would be of little assistance.

To save the teat and the corresponding quarter of the udder would be difficult, for it is almost impossible to gain direct access to the infected part. The teat should be thoroughly bathed two or three times a day with a solution of boracic acid, and through a well-sterilized milk-tube the same treatment should be brought in contact with the infection along the teat canal.

The proper solution of boracic acid is made by dissolving two ounces of boracic acid in a quart of boiling water. A good ointment for applying to the teat is made by dissolving a cake of hard soap in three quarts of hot water and after cooling add and mix thoroughly four ounces each of fluid extract of belladonna and phytolacca (poke-root). This may be used by carefully massaging the affected teat and likely an improved condition will come about at once, but perhaps the quarter of the udder with the infected teat will not prove very productive until the cow freshens again.

If the teat and quarter can be saved and turned dry, this will be the best method of procedure, for the quarter can very likely be saved at the next freshening period. HUGH G. VAN PELT.

Don't harbor the delusion that filth is not a detriment in and around the dairy building during the winter. The heat of summer only makes the scent more pronounced and nauseating. The cold of winter causes one to overlook filth because of lack of odor. But it is still filth.

Feeding Lambs

[CONTINUED FROM PAGE 11]

following short table of the chief fertilizing elements, nitrogen, potash and phosphoric acid, contained in one thousand pounds of most of the foodstuffs I have recommended for lands may serve to point out their fertilizing value. It is taken from a treatise on fertilization by Mr. R. Warrington of the English agricultural station at Rothamsted.

Table of Manurial Constituents, Pounds per One Thousand Pounds of Feed

	Dry Matter	Nitrogen	Potash	Phosphoric Acid
Linseed	882	32.8	10.0	13.5
Linseed-Cake	883	43.2	12.5	16.2
Bran	860	23.2	15.5	27.2
Oats	870	20.6	4.9	6.9
Wheat	877	18.7	5.3	8.1
Corn	890	16.6	3.8	5.9
Clover-Hay	840	19.7	18.6	5.6
Meadow-Hay	857	15.5	16.0	4.3

Sir John Bennett Lawes, director of the Rothamsted station, and the highest English authority on agricultural chemistry, puts the value of the manure from one ton of linseed-cake at twenty dollars and spreads its effects on the soil over a period of years; in the first year the value being ten dollars, the second six dollars and fifty cents, the third four dollars and fifty cents and so on until exhausted. Mr. David Buttar, already mentioned as a leading practical authority, puts the value of sheep-manure as dropped on the land at one third the entire cost of their feed.

I had a rather instructive experience of my own many years ago as to the value of sheep as fertilizing agents, with which I will close this already long sermon. I was farming three hundred acres within a mile of an English manufacturing town of ten thousand inhabitants. They were progressive people and being tired of litigation with neighboring land-owners because their sewage was emptied into the river, they decided to deodorize it, which they effected by emptying their main sewer into a series of pits containing charcoal and, I believe, some other chemical agents. The liquids passed through wire screens to the river, looking like pure water. The solids remained in the pits, perfectly odorless, and looking like gray sandy clay. When the pits were about full, the city engineer asked me what I would offer for their contents. I told him "Nothing, for like David with his armor I had not proved it." I offered to empty them free of charge and he accepted the offer.

I had a fourteen-acre field of a red loam on a light clay subsoil which I had drained and divided into two equal parts by a blackthorn hedge; both of them were in turnips, a rather poor crop of about twenty-five tons to the acre. I carted those of the first field to the yards, plowed in twenty one-horse loads of good farm-yard manure and in the spring plowed in five loads of the sewage to the acre. The other field I folded with one hundred ewes, cutting their turnips and giving them a moderate grain ration and some hay. I kept them there till Christmas, plowing in the manure and rotted leaves as quickly as a line of folds was removed. In the spring I sowed both fields with oats. The first field—the one with the yard manure and sewage—gave a fine crop of oats, fifty-two bushels to the acre, and a good stand of the red clover I had sown with the oats. The field which had been fed off by the sheep gave sixty-five bushels of oats and one of the finest crops of clover I have ever seen. Three years afterward neighboring farmers were paying two dollars and fifty cents a load for the sewage, while I was perfectly contented with my good old sheep.

I hope to conclude these papers with a little study of the best forage crops for sheep and how to grow and utilize them.

JNO. PICKERING ROSS.

Live Stock and Dairy

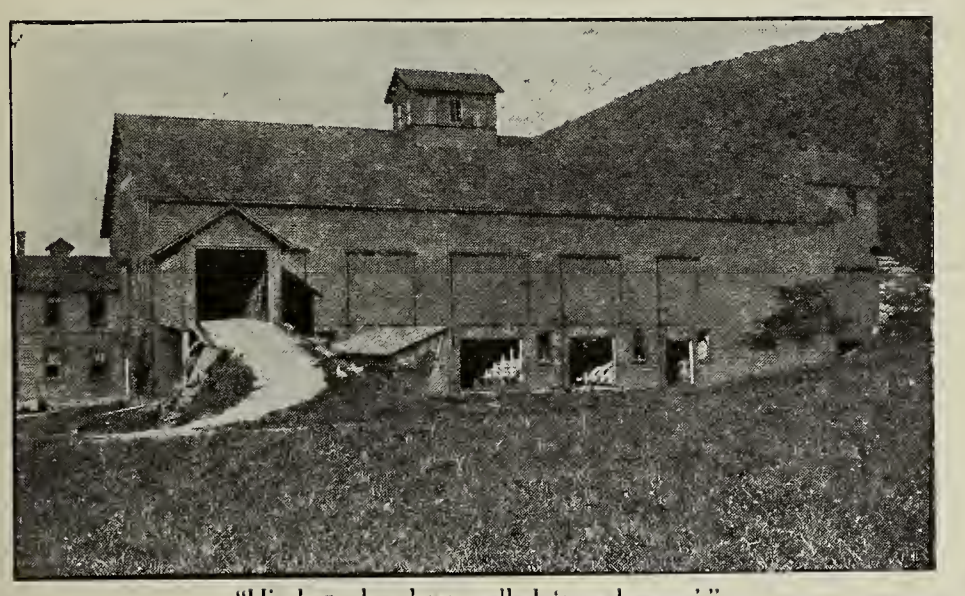
Progressive Dairy in Southern New York

On visiting J. Q. Barlow's farm at Beerston, New York, I saw agricultural conditions very different from those I had seen in other parts of the state. I saw red clover and silage-corn growing along the river in an alluvial soil, on gravel subsoil, and hillside pastures that were as clean of weeds as the meadows. I saw pure-bred and grade Jerseys returning an annual income of one hundred dollars each, with less expense for purchased food-stuffs than on the average farm, and one of the best-planned and best-built dairy barns in New York.

Mr. Barlow has learned how to make corn and clover work for him—the former taking carbon and the latter nitrogen from the atmosphere. Less grain is purchased because corn and clover make so nearly a balanced ration. Mr. Barlow had immense corn. We measured some stalks sixteen feet high, grown on clover sod with a heavy coat of manure. These large crops of corn fill his big silos and help Mr. Barlow to solve the problem of profitable dairy farming. He saves all one hundred dollars per cow. The milk is sold at wholesale prices to a shipping station.

The farm contains only about one hundred acres of cleared land and he makes every two acres keep a grown animal, or its equivalent. Besides the dairy herd a flock of sheep and a large flock of hens are kept. A large supply of fruits and vegetables are grown for home use. The total value of all the products of the farm, including those sold and used in the family, is between four thousand dollars and five thousand dollars. One or two men are hired to help Mr. Barlow and one of his sons work the farm.

The exact net profits of Mr. Barlow and family, I am not able to give, but they are usually twenty per cent. on an investment of ten thousand dollars. He has paid for his new barn, put on permanent improvements, sent two sons to college, made a good living and has all the modern conveniences and comforts in his home. His success has not been due to luck or accident, but is the result of study and hard work, and the practice of correct principles, so success has come to him as effect follows cause. Such success is possible to all who will pay



"His barn has been called 'cow heaven'"

the liquids in the manure by having tight floors and hauls out the manure as fast as it is made. Another reason for the big corn is that he has bought wood-ashes for his land for years. Other farmers may find it best to use lime instead of ashes, but Mr. Barlow has had exceptional opportunities for obtaining ashes.

Clover grows well after corn in the rotation of corn and clover. Any farmer can grow clover as well as does Mr. Barlow, by the use of manure which contains the liquid taken up with absorbents, with lime and the aëration of the soil by deep and frequent cultivation.

Mr. Barlow says the right place for the highly organized sensitive dairy cow is in the stable every night in the year, in well-bedded and comfortable stalls—not rigid stanchions—and protected from storm and cold. In his barn the doors and windows are opened, in hot weather, and there is as much fresh air as out of doors, but no draft on the cattle. Stabling cows nights in summer enables him to renovate a piece of pasture each year, by spreading on it manure from the stable in June and July. It brings in grass and kills out the weeds. He showed me such a pasture that was formerly a weed-patch, but was now well grassed, with hardly a weed to be seen. Mr. Barlow's plan of "mending pastures" should be of great value to many dairymen. His barn has been called "cow heaven." To describe the details of its construction would require another article. It is three-story, one hundred and thirty by forty feet. One enters the basement through an anteroom, which is the milk-room. In it there is running water, a stove and a toilet-room, where one may take off his overalls and wash. After passing the horse-stalls we come to the cow-stable, furnished with forty Bidwell stalls and several box stalls, one for the pure-bred Jersey bull, and others for cows at calving-time.

The bays for hay and the grain bins are on the second floor and here also wagons and farm implements are kept. An overshot bridge leads to the third floor, where hay and grain are unloaded. Silage-corn, which falls into two large silos located at the ends of the bays for hay, is cut on this floor. The roof is slate. The barn cost between six thousand dollars and seven thousand dollars.

Jersey cows have been bred on the farm for years, from a pure-bred sire of the best strains. The cows have been bred up so that they return Mr. Barlow the price. Mr. Barlow is a close reader of the best agricultural literature, keeps in touch with the work of the New York State College of Agriculture by making occasional trips to the institution, and aims to be scientific and progressive.

W. H. Jenkins.

Horses Reformed by Kindness

A man bought a valuable horse of a neighbor, because it had become so vicious as to be considered unsafe to keep where there were children. The buyer knew that children had made the horse vicious; they had not been reproved for teasing or striking him when he was in the stall, or for insulting him whenever opportunity offered. The horse became nearly wild and probably vowed vengeance on those boys at the first opportunity. The opportunity came and he bit the most provoking youngster severely, and was offered for sale.

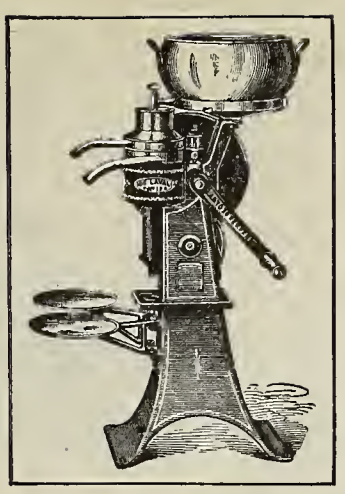
The buyer had children, but they were not allowed to make any animal's life unhappy, neither were they allowed to pet him to surfeiting, but they were trained to see that every animal's wants were supplied at the proper time and that it was always made comfortable and happy.

This once vicious animal became the trusted family horse, spirited, but too intelligent to be timid, and seemingly most grateful for all the kindness shown him. He was a good driver and also a fine saddle horse. In harness or under saddle, he was equally reliable and the father never worried when the children were out with Dan.

Later, one of these children became the owner of a fine team, one of which was known to have been in two runaways. Indeed, when bought this horse's hind legs still showed the effects of the last runaway. "But I want him," said the buyer, "he is too beautiful a horse to be spoiled. He will never run away again." He never did.

I have a mare that was given up by horse jockeys as a hard kicker. When I got her, she was thin, sore and otherwise showed hard usage. Evidently, she had been drilled down, so as to break her spirit. After two years, she hardly switches her tail in the stable, and never kicks. She is in good flesh, healed up and is a valuable mare. I would not part with her for any ordinary sum. All she needed was respectful treatment.

Clarke M. Drake.



An Interesting Incident at the Ohio State Fair

DE LAVAL'S Friends Loyal

Among the many visitors to our booth at the Ohio State Fair at Columbus this fall was a lady who wanted our representative to show her a DE LAVAL. He took the separator apart for her and she seemed surprised at its simplicity and especially at the short time it took to take the machine apart and put it together again.

"Why," said she, "I've got a ——— separator in on trial and their agent told me that the DE LAVAL was complicated, and that it was hard to wash and that the discs would soon rust.

Just then a lady close by spoke up and said, "Why, it's no such thing! I've had a DE LAVAL for eight years and I've never had a bit of trouble with it. It's just as good now as it was when I bought it, and besides it will skim cold milk, and that's what the machine you've got won't do, or any other that I know of, for that matter."

By that time a dozen or more people had gathered round and no less than seven people spoke up and said that they owned DE LAVAL separators and that they were giving splendid satisfaction.

There was one man in the crowd whom the lady looking at the DE LAVAL knew, and she turned to him and asked, "You've got a machine like the one I'm trying out. Isn't it all right?" "Well," he admitted, "it's certainly better than skimming by hand, but it's mussy and gets milk on the floor; it's hard to turn, and if I were going to buy a new separator today it would be a DE LAVAL. I know more about cream separators now than I did two years ago. My brother has a DE LAVAL, and he has tried them all and says the DE LAVAL is the best."

Our salesman didn't have a chance to talk the merits of the DE LAVAL. Our good friends in the crowd persuaded the lady that she ought to give the DE LAVAL a trial before she made any choice, and before she left the hall she gave an order to have a DE LAVAL sent out to her house, and after a ten days' trial she bought the DE LAVAL.

There is a moral to this story: Don't buy a cream separator until you have given the DE LAVAL a trial. It costs you nothing to try it.

The more you come to know about cream separators the more apt you will be to buy a DE LAVAL.

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FARM AND FIRESIDE Springfield, Ohio

Farm Notes

Asked and Answered

FARM AND FIRESIDE'S Inquiry Service is ready to handle the questions of subscribers on all farm topics; but only a few answers, which cover subjects of general interest, can be placed in the paper. Letters of inquiry should, therefore, be accompanied by a two-cent stamp for a reply by mail, and should always give the writer's full name and post-office address. Names will not be published without permission.

A New Jersey subscriber asks: "Is the owner or the tenant compelled to furnish water for domestic use when it has got to be hauled at least a mile?"

The tenant. He should make sure of such things before he leases, and he takes chances on the well going dry.
E. F. McKee.

E. P. Z., New York City, desires to enter in the middle of summer a school where he can get "in a month or six weeks a rudimentary knowledge of soils and farming." We know of no place where such a course opens at such a time of the year. The best course of that length would be the winter "short course" of some good agricultural college. That will give the city man a most useful set of ideas, but no really adequate knowledge. But perhaps E. P. Z. is not entirely a city man.
Editor.

G. W. V., Goldfield, Nevada, and T. H. B., South Canterbury, Connecticut, ask about ginseng culture. Many people think the ginseng business a fake, but we know some who are making money in it as a side line. In recent years the price of the American wild root has fluctuated from six to seven dollars a pound, and the cultivated from five to six in New York. Most people have failed in it because they did not understand it, did not study it or were unwilling to attend to it for the five or six years which are required to make a crop. The seeds are sometimes sold at unjustifiably high prices, but just now they can be had from \$4.00 to \$5.50 per thousand.
B. F. W. T.

Mrs. M. R. W., Carthage, Illinois, asks for information as to cheap abandoned or worn-out farms and the wisdom of going upon one. The commissioners of agriculture of almost any of the Eastern states from Maine to the Virginias have information as to these matters. While there are good opportunities for specialties and in some sections for general farming, on these lands, any one going on them should be prepared for very hard work, slow progress and should have a well-matured plan for the reclamation of the land. Much of it is stony and much gone back to bushes and forest. All of it is held at a price, having in most cases gone to the mortgagees. The commissioners of agriculture may be addressed at the state capitals.
B. F. W. Thorpe.

A North Carolina farmer asks advice about sowing timothy and whether it will last more than one year.

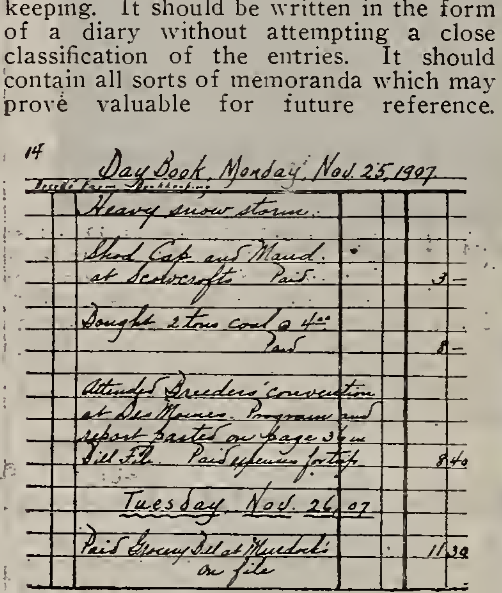
You can sow timothy in North Carolina on good, moist, strong soil in the fall and get a crop of hay the next spring and that will be about the last of it in your climate. Timothy is shallow rooting and will not stand the long Southern summers. It is the popular market hay, but not the best. For cow feed there is little hay that is worth less. One ton of cow-pea hay is worth two or three of timothy. On the rich truck soils in your section a great growth of crab grass naturally follows the vegetables, and if cut as soon as the flower-heads are well developed, will make a hay superior to timothy grown anywhere. I would advise you to sow a mixture of ten pounds of timothy and five pounds of redtop, if you want to try the timothy. A better mixture is ten pounds of tall meadow fescue and ten pounds of tall meadow oats grass seed per acre. This in your climate will give heavier and better hay. For cows add five pounds of Alsike clover after sowing grass-seed. But for cows you can make more and better hay with peas and soy beans and velvet beans than with any grass.
W. F. Massey.

The History of the Farm

The number of inquiries I receive daily on the various phases of the business side of farming convinces me more than ever that the American farmer is beginning to realize the importance of this phase of his calling. I was particularly impressed with some of the personal comments on my last article on the farm inventory. A large number of progressive farmers have already acted on my suggestions. This time I shall say a word or two regarding "The History of the Farm."

This title seems to be somewhat fanciful to such a prosaic subject as farm bookkeeping. And yet, unless important events and transactions can be traced through farm records, they are of little interest and no value. The day book should be neither more nor less than such a history.

The day book is the most important record in the farmer's system of bookkeeping. It should be written in the form of a diary without attempting a close classification of the entries. It should contain all sorts of memoranda which may prove valuable for future reference.



Conditions of the weather, time of planting, breeding, division of field, rotation of crops, sales, purchases, loans, attendance at conventions, recipes, etc., are proper subjects for entry. Though it is advisable to keep the book as neat as possible, it is unnecessary to spend much time on mere neatness. Bookkeeping is a useful rather than an ornamental art.

The single book system is convenient for the small farmer. A good-sized, substantial book may be bought of the stationer for a trivial amount; the daily items are entered in one part of the book, personal accounts in another, accounts with crops in a third, and so on. Illustrations follow:

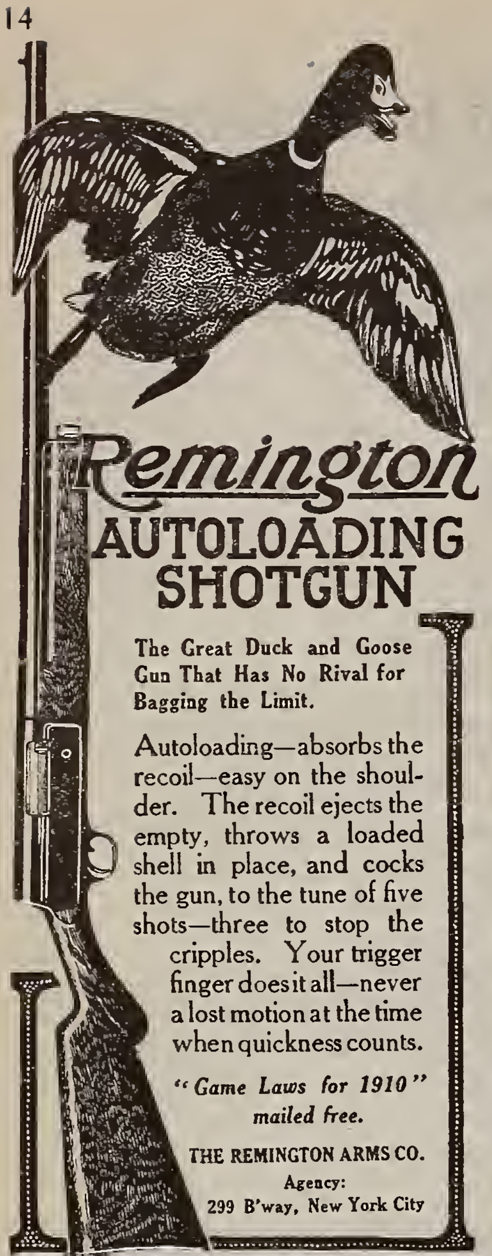
1908 Mrs. Richard King

May	1	Balance	\$3	80	\$	
"	1	1 lb. butter		20		
"	3	2 doz. eggs		40		
"	5	1 chicken		30		
"	12	2 lbs. butter		50		
"	18	2 qts. strawberries		30		
"	25	1 qt. cream		20		
"	31	1 lb. butter		25		
"	31	Cash			5	
			\$5	95	\$5	
		Balance due	\$	95		

1908 Wheat-Field, No. 2, 20 A

April	1	Cost			\$	
		30 bu. seed	\$ 30			
		Threshing	29	25		
		Marketing	8			
		Labor and twine	63			
		Returns				
		418 bu. wheat @ .75			313	50
		Straw			15	
			\$130	25	\$328	50
		Net profit	\$198	25		

Start a simple set of farm accounts without delay. It will prove one of your best investments.
J. A. Bexell.



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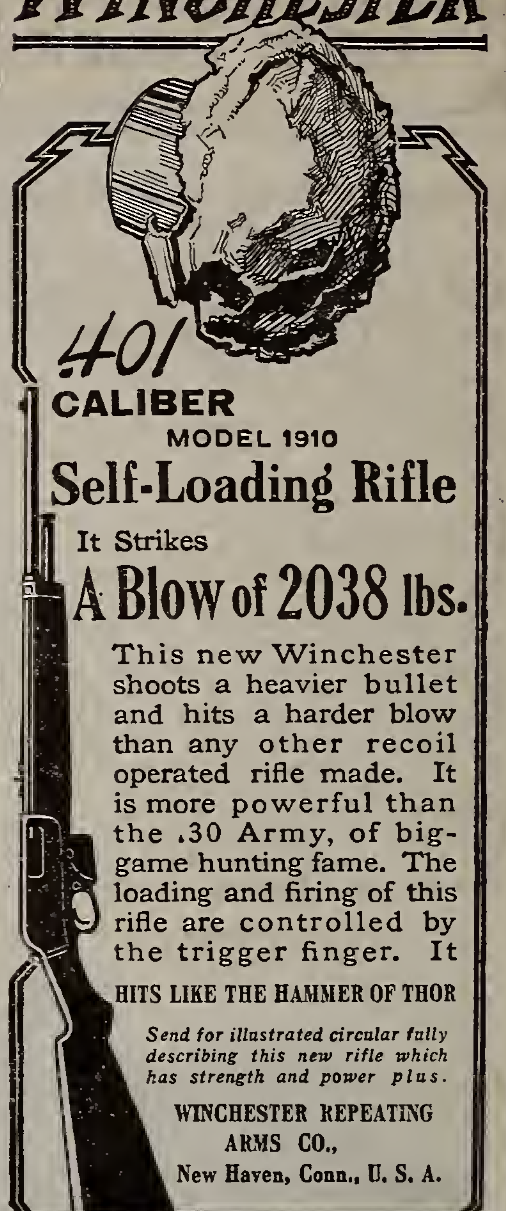

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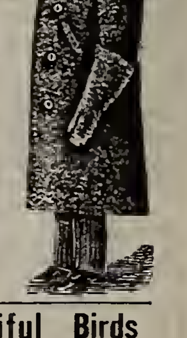

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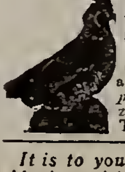

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Stop the Waste On Your Farm

Do the Farm Products You Overlook Outweigh All Your Other Products Put Together?

FARM AND FIRESIDE has just completed a remarkable book which should be read at once by every FARM AND FIRESIDE family. This new book is entitled **"Farm By-Products."** It tells how every farm family can make more money right away. We predict that "Farm By-Products" will be bought by every wide-awake farmer in America. We are holding a free copy of this remarkable book for every FARM AND FIRESIDE subscriber, new or renewal, who accepts one of the offers described below **within the next twenty days.**

Our Great By-Products Book Without Cost to You

EARLY LAST SPRING FARM AND FIRESIDE'S editor, Herbert Quick, made a tour of inspection of some farms. Editor Quick found that most of the farms were well cultivated, well stocked, and prosperous. But not one of these farmers was utilizing one tenth of the valuable by-products which he found on every farm in large quantities. Every farmer, of course, knows what by-products are. Manure is a by-product. So is straw. So is skimmed milk. These are not wasted because the farmer uses them himself. On every farm Editor Quick visited, however, he found dozens and dozens of immensely valuable by-products that rot and waste each year—things of no use to the farmer, but which millions of people in the cities stand waiting to pay for with cash. Editor Quick estimates that nearly as much money can be made from the products the farmers overlook as in all the hogs, cattle, sheep, grain, fruit, and poultry they are now selling.

A Few Secrets From "Farm By-Products"

"Farm By-Products" tells how to cash in on scores of things you pass over every day as valueless. Wood from old orchard trees will sell. There are high-priced markets for half a dozen common sorts of forest wood. Over **two dozen common weeds** have a drug value. Our By-Products Book tells what they are and where they sell

It will be a revelation to you to learn how much money you can make from your garden if you grow the right things and reach the right buyers.

There are a great many possibilities in your woodlot. A dozen different kinds of common wood sell for two and three times their fuel value, if the right market is reached. For instance, hickory, rock elm, oak, osage orange, white oak, black walnut, sycamore, and others, bring high prices when sold for special purposes. "Farm By-Products" tells exactly where and how to sell each of these woods, and what prices you should realize on them.

Do you know that high prices can be obtained from your spruce trees, balsam, and hemlock? **The barks of dozens of our common trees,** (many of them you will find right on your farm) **have a market for medicinal purposes** and bring high prices when sold in the right place. Scrub growth trees yield a product that has an important market value. "Farm By-Products" tells all about this new field of farm profit.

Big Money-Makers

Dozens of home products that you know all about, but have never thought of as valuable, bring good prices in cities if you only know where to sell them.

Do not sell your eggs and poultry the way everybody else does. There is a special high-price market for poultry products, if you only knew how to prepare for and how to reach that market. "Farm By-Products" tells you fully how to get fancy prices for poultry.

"Farm By-Products" tells you how to get more than your neighbors and more than you have ever got before for many other farm side-line products—how to reach a fancy cider market—how to get retail prices for pickles, jellies, ginger beer, home-made sausage, honey, maple sugar, popcorn.

The boys and girls can make lots of money from waste products that they will find on the farm; trapping, milkweed, and dozens of other weeds of no use to anybody but a maker of medicines; basket willows, household pets, frogs, fish, and many other common products that you have thought worthless but **that can be actually turned into gold by the aid of "Farm By-Products."**

Cash for Farm Women

Many farm by-products can easily and quickly be turned into money by the women folks; flavoring extracts, formaline fruits, broom corn, brooms, home-made beauty preparations, perfumes. Many farm products you think worthless, when fixed up a bit bring high prices in the cities among city folks who desire many trinkets that are produced in the country.

By proper methods gravel and stone can be turned into money by the farmer. Do you know that there is a market for sunflower seeds, dandelions, corn husks, hoofs and horns, rye straws, sassafras, horse chestnut, burdock, tansy, skunk cabbage, and dozens of other ordinary waste products?

These are but a few of the 267 By-Products that are fully described in "Farm By-Products." Remember, this great book tells not only where to find all these by-products, but how to market them, where to market them, and how much they bring in the market.

Farm and Fireside will pay liberally for the description of any valuable farm by-product that is not contained in our book.

Turn Your By-Products Into Cash

IN FACTORIES, **nothing goes to waste.** Every possible waste product becomes a by-product. In thousands of factories the by-products double and treble the profits. Sawmills sell their sawdust; shoe factories sell their leather scraps. The beef trust makes more from its by-products (bones, scraps, hoofs, horns, hair, etc.) than it does from the meat itself. It makes big profits on tankage, bone meal, blood meal, etc. It sells everything that belongs to a hog but the grunt. The Standard Oil Company gets nearly fifty by-products from petroleum, and it is these, far more than the oil itself, that have piled up Rockefeller's huge mountains of dollars.

Wasted Money

Editor Quick was convinced that **millions upon millions** of dollars are annually lost by American farmers simply because they have not yet learned the lesson so long ago learned by factories: **Avoid waste—turn every ounce of material into cash.** In other words, **utilize the by-products.**

To get at the exact facts, Editor Quick arranged with forty-one different men, in all parts of the country, to find out all that they could about the various salable things that are going to waste on farms. These forty-one men were all practical farmers or prominent FARM AND FIRESIDE contributors.

Editor Quick told them to hunt up all the **actual cases** in which a farm family is making a **paying success** of marketing any by-product. He warned them, mind you, not to find out theories, but facts—practical, actual cases of where farm waste can be turned into good, hard cash.

These men spent months in this search and they discovered 267 profitable farm by-products that most FARM AND FIRESIDE readers to-day actually allow to go to waste.

The Wonderful Book, "Farm By-Products."

Now, when Editor Quick received the reports of all these different practical men and put all this mass of information together, he realized that here was something of really greater importance than the farmers of America **had ever had before.** He realized that, if farmers only had all of these startling and amazing facts, it would, in thousands of cases, make a radical and complete change in farm life. He realized that the farm families who are keen and shrewd enough to grasp these wonderful opportunities could easily and soon be on the road to **complete independence and comfort.**

So FARM AND FIRESIDE has put each and every fact about these 267 by-products into a book—a book called **"FARM BY-PRODUCTS,"** a remarkable book that represents several thousands of dollars outlay and which **ought to do more for the American farmer than any book ever printed!**

By-Products Pay Big Money

FARM AND FIRESIDE'S investigation has proved that these overlooked farm by-products are not only numerous, but they are present on every farm in such wide varieties as to demand the attention of every man, woman, boy and girl who lives on a farm. For the by-products are the best **profit payers** of all, and can easily be made ready for selling.

267 Money-Makers

Our great book, "Farm By-Products," describes fully every one of the 267 valuable by-products that FARM AND FIRESIDE'S experts find are being wasted by most farm families. It tells where to find each and every by-product, how to prepare it for market, just where and how to sell it—moreover, it tells what the average price for the by-product is at the present time. Here is a truly amazing book, every page containing new wonders of hidden treasures that exist right in your farm, and that can be turned into money. The book is practical from cover to cover. Every by-product contained in the book has been utilized. Every description is from practical experience.

This truly amazing book is so complete that as soon as you get it you and your wife and children can begin at once to dam up the stream of gold which has BEEN RUNNING TO WASTE ON YOUR FARM.

Furthermore, FARM AND FIRESIDE'S Bureau of Information will give you full further facts about any by-product in which you are interested.

To obtain your copy of "Farm By-Products" without cost, you must fill out the Order Blank below, within the next twenty days. Read our great offers below, and send your order to-day.

How to Get the Book Without Cost

HERE'S the biggest value FARM AND FIRESIDE has ever offered its readers. You will want our great book, "Farm By-Products," and you can get it Free, if you send your subscription within the next twenty days. Read below our Bargain Offers:

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Send $1.00 for one three-year subscription to FARM AND FIRESIDE. You will receive our new book, "Farm By-Products," free, postage prepaid.

We will present you, in addition, with 25 handsome Thanksgiving Post-Cards, if you will order promptly.

OFFER No. 2

Send $1.00 for a club of three different yearly subscriptions to FARM AND FIRESIDE. You will receive our new book, "Farm By-Products," free, postage prepaid.

We will present you, in addition, with 25 handsome Thanksgiving Post-Cards, if you will order promptly.

OFFER No. 3

Send 50 cts for a one-year subscription to FARM AND FIRESIDE. You will receive our new book, "Farm By-Products," free, postage prepaid.

Now is the time to send your subscription to FARM AND FIRESIDE. Every reader who sends a subscription **within the next 20 days** will receive our great book, "Farm By-Products," without cost.

If your subscription to FARM AND FIRESIDE has not expired your new subscription will begin with the month after your present subscription does expire.

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Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelope.

When renewing your subscription, please say it is a renewal, and if possible send the label from a recent copy. If all our subscribers will do this a great deal of trouble will be avoided.

FARM AND FIRESIDE

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FARM AND FIRESIDE does not print advertisements generally known as "readers" in its editorial or news columns.

Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment.

Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser in this paper should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

FARM AND FIRESIDE is published on the 10th and 25th of each month. Copy for advertisements should be received twenty-five days in advance of publication date. $2.00 per agate line for both editions; $1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2¼ inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

Letters regarding advertising should be sent to the New York address.

The Road, the Auto and the People

A DELEGATE to the National Good Roads Association at St. Louis made a strong plea for the rule that the automobile be always allowed the middle of the road, that the sides of the road be reserved for other vehicles and that children be taught to keep off the roads near their schools and homes.

His demands have some merit. Where the road is wide enough for three distinct lines of travel, the median line may well be given over to motor cars. But where the highway, as is the case almost everywhere, is just wide enough, in respect to smooth road, to allow one good track, we respectfully serve notice that the teams must be given their share of it. If it is rough or muddy outside the track, the touring-car will have to share the splash with the wagon. The middle of the road has been too long the property of the populists and their rural neighbors to be readily given up.

In some portions of the country, the division of the highway between teams and autos is put in operation automatically by making a good earth track beside the macadamized way. The drivers of horses always prefer the earth to the macadam, when the going is good. It is easier for the horses' feet and far easier for the person driving. The teams go to the dirt, the autos take the macadam and every one is happy. When the mud reappears, they must share the pavement.

The demand that children be taught to keep off the roads is worth conceding. There are so many cars on the roads now that a country lane is only a little less dangerous than a railway track. Indeed, it may be even more so—for the auto is more quiet than a train, and at times quite as rapid in speed. Better teach the children to keep off the track so far as playing is concerned. But we shall scarcely ask the kids to draggle through the wet grass or walk in the rough to clear the way for cars. The roads are for children as well as for motor-cars.

There will always be children and foot passengers on the country roads. That is what the roads are for. Drivers of cars must always remember that a child is likely to step into the road from any clump of bushes or weeds, or to be found just beyond every curve, or to be just crossing on any intersecting road. There is only one safe rule for these cases, and that is the legal speed limit where one exists, and whether there is one or not, the automobilist must be held in duty bound always to have his car under perfect control. Perfect control means such control that he can easily stop it in the distance between any possible cover for a child or pedestrian and the path of the machine. He is driving a deadly projectile. The law gives him the right to drive it. And if he drives it so as to injure other persons lawfully on the road, the law should give it to him—in the neck. The rule may be severe, but the violation of it is too perilous to be permitted without severity.

* * *

A man must get out of the clouds if he would see the rainbow.

Trot square yourself before you kick because somebody else is a bit off in his gait.

He is a mean husband who keeps a close eye on his wife's expenses, but expects her to keep a closed eye on his.

"Jim Hill Mustard"

THE Portland Labor Press remarks that the pestiferous weed called out there "Jim Hill mustard" is playing hob with land values in the Northwest. It is asserted that there are lands originally worth seventy-five dollars an acre which can not be sold for twenty-five on account of the mustard. Our exchange suggests single tax and a breaking up of the big farms into little farms as a means of doing up the mustard. Well, that might work; but in the meantime why not try a spray of iron sulphate? That also will do the business. In this connection, we think a fairly profitable trade would be that of learning how to eradicate weeds and then buying lands infested with them and proceeding to eradicate. In some parts of the Northwest, it is rumored, lands overrun with quack grass are on sale at much less than the market price. Both quack grass and mustard can be successfully handled by those who know how.

An Iowa preacher has invented a self-unloading wagon. It's ten to one that it is not a water-wagon.

It is a mighty mean man that won't turn another man's stock out of a third man's corn. Here is where "butting in" is timely.

Some men hurry to get their horses and cattle under cover when a cold storm comes up, but stay out themselves and get chilled through and through. Every such exposure clips a bit off the thread of life.

The farm water-supply, both for live stock and family use, should be looked after in early fall when wells and cisterns are often low and can be easily pumped dry. Every cistern and nearly every well should be cleaned at least once a year.

Our Third of a Century

A THIRD of a century is a long time. Measured in dangers and chances of ruin, it is a fearfully long time. When a man or woman reaches the age of thirty-three, without having contracted any ruinous vices or developed serious mental or moral defects, we begin to think of him or her as a good risk. The character is settled. When a man or woman seems to go wrong after the age of thirty-three it is usually a case of being found out rather tardily. Probably the wrong dates back a long time.

FARM AND FIRESIDE is soon to be a third of a century old. Hundreds of papers that started when we did have given up the ghost. Some went in teething, some in measles and other infantile ills, and some succumbed to vices and the dissipation of the race for advertising and subscribers. Many of them have died because they failed to realize that a farm paper must be better, more honest and more absolutely on the square than a general paper. The agricultural population of this country are induced to admit enough swindlers and fakes into their houses and businesses without having them brought in through the post-office in the guise of a farm paper. When the farmers see that their farm paper is introducing such people, they cancel their subscriptions, we are glad to say.

There must be among our readers some who have had the paper ever since it began. They have seen great changes in the paper and in the nation. We should like to hear from such old friends. We feel a peculiar regard for those who have found good in FARM AND FIRESIDE when it had much less of light and leading than it has now, and much less than we hope to attain in the future. Please write us if you are one of these oldest readers. We really want to correspond with you.

* * *

Put the feed grain through the fanning-mill? Certainly. That means that no weed-seeds will pass through the stock and be hauled to the field in the manure.

Furnish the farm boys with a few good, No. 1 game-traps, and let them clean up the hen-roost robbers, besides earning spending-money for the holiday season.

The farmer driving through town with his prancing horses drawing a fine rig is the farmer on parade. The farmer in the field behind the plow is the farmer proving his right to be on parade.

Cabbage, pumpkins and all large vegetables are unhealthy things to have stored under the living-rooms of the farm-home. The place for storing these large products is in the root-cellar or in storage-pits.

How to Get Together

JOHN LEE COULTER, who knows as much about coöperation as any man living, will contribute to our next issue an article which we believe to be the best brief exposition of this subject ever presented, and which, we are certain, is the most important article any agricultural paper has published this year. Every reader of that issue will be surprised by the far-reaching scope coöperation has attained, and every farmer should be inspired by the example of the great and successful organizations whose working methods Mr. Coulter describes.

Prosperity and Good Habits

ONE of the most remarkable farm movements of recent years has occurred in Hungary. For many years the Hungarian peasants were in a state of slavery to the money-lenders. The great land-owners, half a century ago, established coöperative banks for their own purposes, and their example was soon followed by the middle-class land-owners. The poor farmers, however, were still the prey of the loan sharks and obliged to pay for money to use in their farming operations such usury as forty, forty-five or even fifty per cent.

About 1890, however, the coöperative credit-bank movement, under which the farmers of Germany, Italy, Holland, Belgium and France have by their own common sense emancipated themselves from the loan sharks—a thing which the American farmers may some time do—reached Hungary. Banks were established by the dozen, at first, and later, by the hundred, after the schemes of the loan sharks for their destruction—at first successful—had been defeated. The farmers became their own bankers. When it was found that in some portions of the nation they were too poor to do this, the government helped—and the Hungarian peasantry at last experienced freedom and what to them seemed prosperity.

They had to bring in their dues to the banks each week, and thus met and visited together. They began to put their purchases together and order merchandise in large lots. So they prospered more. And one result that astounded many people was that drunkenness fell off and the people became more moral. There is a lot in this for our consideration—a whole lot aside from the drink phase of it.

* * *

Quarrels make enemies and leave the question still unsettled.

If every farmer could but see the real figures, showing the comparatively small cost of maintaining good roads and the loss caused by poor ones—get busy with the drag!

The landlord who had charge of the inn when Joseph and Mary called may be considered an honest fellow after all, for he offered the most comfortable accommodations he had left. But what can be said of the man to-day who refuses to admit the Lord into his home, where there is room, and even denies him a place in his stable?

With the advent of scientific agriculture there is bound to appear a new and better type of statesmanship; for the new farmer will refuse to be farmed by the professional politician as the old type of farmer has been. The conservation of the soil will demand economy of cost in the distribution of products from producer to consumer. It is the statesman's business to provide for the reduction of that cost to the lowest possible terms, so that the benefit of it may accrue both to the producer and the consumer, and not to the coffers of those who monopolize the means of distribution.

Our Successful Sheep Series

THE problem of the hour at the tables of innumerable consumers is how to secure an adequate meat-supply that is both healthful and palatable. Sheep, in their ability to utilize rough, untillable land and the weeds and waste of all land for the production of one of the most appetizing and nourishing of meats, must be a big factor in solving this problem. Believing this, it is a source of satisfaction to us to have been able to place before our readers such a complete treatment of present-day sheep-husbandry methods as is contained in the series, now drawing to a close, by John Pickering Ross, ably supplemented by our other contributors. England has fairly won and held the palm for successful intensive sheep production; hence, the experience of Mr. Ross, there and here, enables him to furnish the most practicable and valuable counsel for the aid of that growing army of farmers who are now undertaking this branch of animal husbandry or are turning an investigative eye toward this industry once so universal, but which has become almost a sealed book to the present generation.

By Judson C. Welliver

Now that the base-ball season is ending, the farmer will get a chance to go to bat. About this season of the year it is well to look out for the farmer, for he is very apt to go to the plate and smash out a few optimistic home runs just for the purpose of patching up the batting average of the home club. Just now, and for some months past, pessimism has been in the pitcher's box and has been providing a sort of delivery that has been exceedingly hard to solve.

In a business way, the country has rather been in a bad frame of mind. Without any possible excuse for anything but optimism, the curious complexity which calls itself business sentiment, has persisted in feeling depressed. The railroads have been standing around, first on one foot and then on the other, drawing faces almost as long as their through trackage and insisted that they just naturally were in an awful state of mind. They must have more money, and have it right away, or everything would be hopelessly to the bad. They discovered that President Taft and Attorney-General Wickersham were a duo of exceedingly bad citizens when the President and attorney-general unexpectedly interfered with a nation-wide project of raising freight rates to an extent that would have added nearly a billion dollars a year to the gross revenues of the raisers. I get that billion figure, by the way, from the testimony of several Chicago witnesses before the Interstate Commerce Commission. The most conservative estimates made it three hundred millions.

But I wasn't going to talk at this point about that billion or so the railroads are sure they need. I had set out to indulge some fleeting observations about the farmer coming to bat and about how his stick work is going to save the international championship for Uncle Sam in this good year 1910.

The Farmer and the International Balance

There is just this much ground for certain vague misgivings about business, which has been exaggerated beyond all reasonable proportions; the balance of foreign trade has been adverse to the United States for the first eight months of the current year. That is to say, from January to August inclusive, for which the figures have just recently been issued, the statistics of the Bureau of the Department of Commerce and Labor show that we have imported more merchandise than we have exported. I don't know just why as a nation we are all obsessed with the notion that when we import more things than we export, we are getting poor. Last month I bought a team of horses for three hundred and fifty dollars and didn't sell anything like three hundred and fifty dollars worth of produce. The balance of trade was hopelessly against me, but I was utterly unable to view the situation as calamitous because I needed the horses and was prettty sure they were worth more to me than the money. The money was perfectly good money, but it couldn't do my fall plowing. With the assistance of those two horses the plowing is now done, and it was mighty dry plowing at that.

I can't help thinking that the national balance of trade is a good deal like that horse trade. If Uncle Sam wants a billion dollars' worth of merchandise and has the money to pay for it, wouldn't he be justified in figuring that the merchandise was worth the money, that he was mighty lucky to have the money, and when he had got it turned into goods that he wanted, he was better off instead of worse off than before?

This isn't such a foolish line of persiflage as might be suspected by folks who entertain the old-fashioned notion that an adverse balance of trade means that we are bound for the bow-wows in a basket. Great Britain, for instance, is the richest country in Europe and has uniformly a huge adverse balance of trade. France, the most solid country in the world financially, always has a big unfavorable balance in its international trade.

Anyhow, folks who think an adverse balance of trade is bad business are looking to the farmer to correct it. He will, too. We are pulling off another of these eight billion or nine billion crops in this country this year, in spite of the Western mid-summer drought. By the time this letter appears in print our cotton and wheat will be in full flow to the other side, and the adverse balance of trade will be down and taking account. The last four months of the year constitute the farmers' inning, when his products do the heavy stick work that wins the game. The measly little balance that stood against us on the international ledger on September 1st, will be wiped out and before Christmas the figures will be written in black instead of red and will indicate that we have something substantial coming.

If it were not for the farmer the trade balance would be against us pretty much all the time, these late years. In fact, if it were not for the cotton crop alone the showing would be against us, nearly all the time. Which reminds me.

Some months ago some clever scamp forged bills of lading, purporting to represent big shipments of cotton from this country to English manufacturers. The bogus bills looked just as good as the real kind, and when they were presented to British bankers the cash was promptly paid over the counter; some millions of dollars of it; enough to make almost anybody feel uncomfortable, as the British banker certainly did on discovering that the bills were worth about as much as a third mortgage on a quarter section of blue sky.

The aggrieved British bankers opined that the proceeding ought to be discouraged in future. They served notice on the bankers of the United States that some plan would have to be devised, to prevent a repetition of such fraud, or they, the British bankers, would stop cashing American cotton bills and England would quit using our cotton.

The American Bankers' Association considered the matter and made proposals to their British confrères looking to the safeguarding of such credit instruments. The British bankers decided that the American proposals were not satisfactory and that nothing less than an absolute guarantee by some American banking or transportation authority could be accepted. Of course, the American bankers could not accept this proposal because it would have amounted to making them take all responsibility of safeguarding against forgery and fraud.

Thereupon the British bankers flatly declared that they had done all in their power, and that unless the Americans found a way to meet their demands, in substance at least, they would discontinue, on October 31st, honoring any American drafts against cotton bills of lading. Some nervous people have been worrying violently about the possibility that this might close the British market for our cotton of this year's crop.

Don't you believe it. The English cotton manufacturers need that cotton quite as much as we need their money. Some time between now and October 31st the bankers on both sides will decide to stop bluffing, will put their hands down on the table and will agree to divide the pot. It is to be hoped that they will reach an agreement which will increase the guarantees of that great class of commercial paper which, in the world's business, is the most eloquent testimonial of the fact that after all most of the world is honest and that dishonesty is the rare exception rather than the rule.

This incident of the cotton trouble is the finest illustration we have had in a long time of the importance of the farmer in our business life. He is the one individual who is producing something that the world just naturally can't get along without. You might as well talk about cornering the air, and feeding it out to folks through pipes with a gas-meter for every individual to drop quarters in as to assume that the world or any considerable part of it is going to permit itself to be shut off from the things that the American farmer produces.

Pretty Soft Hard Luck

I was saying something about the Interstate Commerce Commission investigation of the railroads' demand that they be permitted to increase their rates. The commission has been holding hearings in Chicago, Washington and New York to gather evidence from which it may judge whether the proposed advances ought to be permitted. Under the new railroad law, passed this year, the commission has authority to negative any proposed advance in rates if after investigation it is found that the advance is unreasonable and unjustifiable.

The railroad men have been insisting that they must have the money in order to pay the higher wages which they have been granting to their employees this year, to pay higher prices for the materials they use, which, like everything else, are getting more expensive in this era of advance in cost of living, and to provide for betterments and extension which the growing volume of business and the increasing population of the country make absolutely necessary. The representatives of the shippers have been delving deep into the financial affairs of the railroads, and among other things studying the receipts and disbursements of the roads in recent years. They have developed that the hard-luck story of the railroad men appears to be in a good many cases rather apocryphal. One system after another is shown to be earning more money, both gross and net, than in the banner previous year of railroading, 1907.

Not only that. While the railroad people have been protesting that they must have the privilege of advancing their rates in order to keep their credit good so that they might get more money to invest in their properties, and while a good many of them have been urging that the disposition to pass regulatory legislation has been making the investors squeamish about putting more money into American rails, the truth is that both European and American capital has been showing a most amiable disposition toward good American railroad investments. Thus, Interstate Commerce Commissioner Lane came back from Europe not long ago with the declaration that millions upon millions of European money are ready for good investments in American railroads. Incidentally, he said that one of the good effects of the recent legislation, looking to federal control of the issuance of stocks and bonds, will be to strengthen foreign confidence in this class of American securities.

Incidentally, Commissioner Lane enthusiastically declared that while attending the international railroad conference at Berne he was impressed as never before with the superior efficiency of the American railways. "One of the questions left in my mind," he said, "is how European railroads manage to pay four, five and six per cent. dividends with the small volume of traffic they have, compared with the volume we have. I have seen more freight moving in a single hour at Chicago, Pittsburg or Jersey City than I saw in an entire month in Europe. The answer of the European railroad men is that their railroad systems are entirely adequate to their needs."

Government Regulation Becomes a Fact

The present examination by the Interstate Commission into the reasonableness of proposed rate increases is the first assumption of the government power to determine broadly what income the railroads may be permitted to earn and what rate of dividends their stockholders may expect to be allowed. It is really an epochal thing, this final assumption by the government, after twenty-odd years of discussion, of real authority over the financial operation and rate charges of the transportation companies. And in that connection it is worthy of note that the railroad people have all along resisted any inquiry into their actual investments and the actual valuation of their properties. They protest that the valuation of their property had nothing to do with the reasonableness of their rates or with the justification of their capitalization. The attorneys for the shipping interests have taken sharp issue on this point and in the last analysis this question is going to very largely determine as to whether the increased rates shall be permitted or not.

It is generally conceded now that the Interstate Commerce Commission has sufficient authority of law to proceed to make valuations of any or all the railroads. Congress, however, has never appropriated enough money to pay for this gigantic task, which would probably cost from two million to five million dollars, depending on the speed of the investigation, if all the roads in the country were to be valued.

One of the discomforting things about these proposed rate increases is the fact, which the shippers have constantly pointed out, that the rates on trust-controlled articles have not been advanced. Thus lead, iron and steel, sugar and numerous other articles of trust production were shown to have been left entirely unchanged in the new schedules put out by the New York Central and other very important systems, while on other classes of freight in which the trusts are not interested, very considerable increases have been made. This favoritism to the big aggregations of capital has manifestly left a bad taste in the mouths of shippers and commissioners alike, and there is already some anticipation that the commission may veto the particular rate sheet now under consideration for this very reason.

Quite incidentally it may be worth while for the farmer to know that he is not regarded as a trust and that his freight gets its rate good and plenty boosted.

The Craig Conscience

By Izola Forrester

Illustrated by George Avison

"Just one minute, please, Miss Craig," said the president excitedly. "Mrs. Leonard has the floor."

It was quite true. Mrs. Leonard had the floor morally as well as literally. Small in stature as the minister's wife was, her dominant voice that would make itself heard against all protest, her incisive, earnest way of speaking, insured her ready attention always on the floor of the Ravenswood Neighborhood Club. Doubly so to-day, when every member present hung upon her words. They were fiery, zealous words, thrown at the club with much the same conviction of rightful denunciation used by young Mr. Leonard over at the steepled old white church that faced Ravenswood's triangle of green grass and red geraniums in the center of town.

"I repeat, madam president," Mrs. Leonard reaffirmed, cognizant in every nerve of Eleanor Craig's tall young figure back of her, "that we have no right to accept this gift. It is a positive insult to our aim for a man in Mr. Craig's position to even offer it. Here are over four hundred men out of work across the river because Mr. Craig has shut down his mills. Mr. Craig states that his reason for closing down is the hard times, the financial pressure being such that he can not continue business on a paying basis. Let me tell you, madam president and ladies, that Mr. Craig has been doing business here in Ravenswood for over nine years on a basis which has already paid him over forty per cent. on the original investment. Let me tell you that Mr. Craig is negotiating for the purchase of a steam yacht for over thirty thousand dollars. It will consume about ten thousand a month to run it, of Mr. Craig's accumulated profits, and I understand that Mr. Craig and his family intend sailing on it for eastern ports until the business prospects in Ravenswood warrant reopening the mills. Such is the state of affairs."

"Madam president," the ringing young voice came again from behind Mrs. Leonard. Stout Mrs. Gregory, the doctor's wife, gasped faintly, but enjoyably, over the situation. Never had there been such an issue in the Neighborhood Club before. The president's gavel fell sharply.

"Mrs. Leonard has the floor, Miss Craig."

Mrs. Leonard smiled triumphantly and went on firmly, as Eleanor sat down in her seat and pressed one gloved hand to her hot cheek.

"In the meantime, while Mr. Craig is taking his vacation, I ask you, ladies, what is to become of these four hundred workmen and their families, left here to starve? They will be left here to simply do the best they can, on our hands, in fact, to give what charity we are able. And the plain truth is that the club will not be able to handle a hundredth part of the poverty and privation that will crush these people before the summer is ended, before the business outlook will justify Mr. Craig's resuming work."

"Mrs. Leonard, I insist upon being heard," cried Eleanor.

"Just a minute, Eleanor," returned Mrs. Leonard, without turning her head, and she went on her crusade course once more. "It isn't enough for us women to flatter ourselves that we are doing good by forming little neighborhood clubs, and mothers' meetings and girls' literary and musical evenings here. It is not enough to relieve as best we can the extreme cases that come to our notice during the hot months or to defray the funeral expenses of one after another of the weakest ones who can not stand this chronic starvation. What shall we say to helpless mothers who will come and ask us how they are to put food in their babies' mouths? Tell them Mr. Craig's health demanded a yachting trip? I say that it is heartless and disgraceful, the whole situation. We ask Mr. Craig for help and he calmly offers us free flour for distribution among the deserving poor."

"Mrs. Leonard, you speak of my father as if he had no conscience, no heart whatever—" Eleanor Craig's blue eyes were full of bitter tears and her lips quivered with emotion that refused further restraint. Her chin was upraised, but her white young face and unsteady voice swept a wave of sympathy over her way. It was impossible to forget that old Traverse Craig had assisted the club at every appeal since its inception, also that he was vestryman over at old St. Paul's, and Mr. Leonard's upholder against those who demurred at the younger man's innovations.

But parliamentary rules went to the four winds in spite of the president's pounding gavel on the black walnut, felt-covered table. Mrs. Leonard had turned fairly around and faced Miss Craig.

"Eleanor, my dear," she said kindly, but resolutely, "you and I understand this crisis thoroughly. If your father has either a heart or a conscience, then he must keep them both carefully cocained."

"Mrs. Leonard, have you finished?" demanded the president, rising from her chair, with both hands uplifted. "Ladies, I must demand order in the club."

"No, madam president, not yet," came back Mrs. Leonard's ringing tones. "I move that we write a letter to Mr. Craig, declining his offer of free flour in the present crisis and stating our reasons for so doing."

"I second the motion." Grace Dudley was on her feet instantly, before the last word had left Mrs. Leonard's lips.

A tumult rose, but above it the voice of the president went steadily forward. The question was put. A viva voce vote was taken. The Neighborhood Club rallied to its own purpose and aim gallantly, and the corresponding secretary made a note to the effect that Mr. Craig's offer was to be rejected.

After the meeting had officially adjourned, an informal session was held around two objective points, Mrs. Leonard and Eleanor Craig. Between the two went as ambassador, Grace Dudley, resident head worker of Neighborhood House. And when the rector's wife and her band of adherents had withdrawn, Eleanor went up-stairs to the sunny back room that was the head worker's own particular den and sanctuary.

It was a charmingly restful room. The walls were in dark green, the floor stained a deep weathered oak. Rows of flowering nasturtiums and mignonette showed brightly in window-boxes beyond the straight full curtains of écru net. The lace scarf on the side table was a gift from the class of Italian girl lace-makers. Everything in the whole room seemed to breathe of the scope and result of the neighborhood work.

As soon as the door had closed, Eleanor threw herself down among the cushions on the rattan settee and sobbed without restraint.

"Oh, that terrible woman," she cried helplessly, "how could she say such things when father has simply held up St. Paul's for years. Why, Grace, he even gave the five-hundred-dollar increase of salary this year to Mr. Leonard out of his own pocket because he really liked him."

"I know." Grace was silent for a minute. Her face looked tired, but there was the customary glint of good humor in her brown eyes, and a half smile on her lips. "Perhaps those are the kind of acts that Mrs. Leonard calls the cocaine he silences his conscience with."

"Then do you think as she does?" demanded her friend, lifting a flushed, intense face from the pillows.

"No," returned Grace slowly, lifting the pansies up to her face as she spoke. "I am not quite so personal in my feelings as Mrs. Leonard. I really think she feels that a vestryman of St. Paul's should perhaps follow out better the teachings of the man who went into the fields on the Sabbath and gave the corn to his followers. I simply see the practical side of it. Mr. Craig has no right to close down the mills. He shuts off any possible chance of livelihood from these people in doing so, yet he intends spending quite as much money as he would lose should he keep up the mills; he is going to spend this surplus wealth on a pleasure trip. It is mighty inconsistent. Under the circumstances, I think it is almost criminal. I only hope that our protest may do some good."

"Grace, listen to me." Eleanor pushed back her tumbled fair hair from her forehead and leaned forward with a sudden earnestness. "Father is not going away on that trip. You might as well know the truth. I know you won't tell. That trip was for me. It was to be my wedding trip. Now, do you understand? The yacht was to be one of my presents from father, too. Can you see now, how every word that woman spoke went through me like a knife? Can't you see what a selfish, unseeing hypocrite I seem to myself. Here I am, working every day among you and the girls, and yet I had never thought what this would mean to them at this time. I feel as if all my work down here had been just as Mrs. Leonard said, an anodyne to the conscience."

"She put it even more simply, she said plain, everyday cocaine," laughed Grace, then suddenly she stopped and seized on the main point. "Are you going to be married?" It was a rather personal question.

"Yes, I am going to be married," repeated Eleanor, flushing deeper. "Nobody knows yet, but the man I am determined to marry is John Carteret."

"Going to marry John Carteret, you, Eleanor?" Miss Dudley drew in a deep breath, just escaped the perilous laughter that rose to her lips and leaned back in her chair to think.

John Carteret was not a recent acquisition to Ravenswood. He had come to the mills four years before, from some Western manufacturing town where he had been partly a labor enthusiast, partly a son of inherited wealth that troubled his conscience. Traverse Craig had liked the youngster. He had an idea for a patent grain-extractor and Craig financed the thing and gave Carteret his first big chance. Carteret took it and was finally made superintendent of the flour-mills. There he balanced himself pretty equally between two forces. The men liked him. He introduced one improvement after another, and worked for Craig's interests even while he managed to strike a fair balance by attending the labor meetings and helping Grace Dudley with her own problem at the Neighborhood Club. Among the workmen he was even more popular than Craig himself, so much so that his name had hardly been mentioned in the lay-off crisis. It was rather a bewildering shock, therefore, to Grace to hear the news of his coming marriage.

"You don't approve?" asked Eleanor, quick to catch the trend of her friend's thoughts.

"Why, I had an idea that Mr. Carteret was a bit socialistic in his principles."

"So he is," assented Eleanor. "That is why we first found out that our interests and ideas were in common. So is papa. But they only see the big idea of it, what it may mean to business in general and all that sort of thing, if it should happen. They can't get down to a concrete application over an issue like this one. You know what I mean. You couldn't make them see what possible effect my getting married would have on the laying off of the mill workers."

"But you see it, don't you?"

"Oh, yes," said Eleanor bitterly. "I see it now. And you needn't be afraid of me, Grace. I am no coward."

"What do you mean?" Grace rose, also, alert and troubled. "Shall you resign from the club work?"

"No, not from the club work, from the yachting trip."

"And from Mr. Carteret?"

"That is for him to say. Good-by."

Grace did not attempt to stop her or to follow her down the stairs. She stood by the flower-filled window-sill thinking. After a few minutes a curly-haired girl of nine or ten put her head in at the door. Was Miss Dudley ready for the Lowell class? It appeared that Miss Dudley was not. The Lowell class was adjourned then and there, for the first time in its existence, and Grace Dudley walked out of the settlement house, feeling suddenly that her own horizon was suffering an earthquake of readjustment.

Her way led through the little side streets along the river front. The children playing on dusty grass patches in yards called out to her as she went along, and the women sitting on the doorsteps gave her a quick approving glance and a nod of friendly understanding.

The mills stood down below the bridge where the falls were. She could see them now as she turned up the main street, towering and blind looking, with all their iron shutters closed. Groups of men stood idly about, lounging over the bridge rail or standing about corners talking. Each of the corner groups usually had its own central speaker, she noticed, and as she came abreast of one it parted and John Carteret walked out, bidding the men good-by with a cordiality and understanding not exactly in keeping with his character of boss. At the corner he came up to her as she crossed the street.

"I thought you had given up interest in this part of town," she greeted him.

"Since when?" he asked.

"Since you became the boss, as the men say."

"That seems to be the general idea, the necessary loss of interest once you are a boss."

She did not answer directly.

"We have just had a stormy session of the club. I am going up to the Leonards now to see if there isn't some way to smooth the rough edges. An appeal was made directly to Mr. Craig for relief last week, and he answered it by an offer of all the free flour we needed in our neighborhood work."

"What sort of relief did the club want?"

"I don't know, unless it was that we had a half idea some quixotic impulse might make him see the real need of the situation he has brought about."

"But he didn't bring it about. That is what I have been telling the men. He could not prevent the simple fact that the bottom dropped out of the wheat market and deliveries are below the orders. He was losing money every day he kept the mills open. He is as much a victim of the system as the men."

"How the perspective of John Carteret has altered during one short year," she said. "Is it so blurred that you can not even see the difference between the 'victims' as you call them. One can close up his works and take a yachting trip for pleasure. Meanwhile, these men are left to starve here, with their wives and children."

[CONCLUDED ON PAGE 21]

"She simply held out his ring to him. 'I can't keep it any longer, John,' she said"

Our Puzzle School

Conducted by Sam Loyd

A Study In Hams

HANS, the peddler, had a load of hams which he was selling for one dollar and twenty-five cents each or seventy-five cents for half a ham. His first customer took half of his stock and half a ham. The next customer took half of what was left and half a ham and directed him to another place where he readily disposed of half of the remainder and half a ham.

He then came to a large hotel, the proprietor of which was not at home, but he managed to prevail upon his wife to take half of his stock and half a ham. He continued his journey, but had not gone more than a quarter of a mile when he

met the hotel proprietor and a friend. The hotel man, not knowing his wife had purchased any of the hams, took half a ham and half of what remained, and induced his friend to take half of what was left and half a ham, which just cleaned out his stock.

The question is, how much money did Hans get for his hams?

A Charade

Of my first you have two, but here one may do.
To explain it, more need not be spoken;
In my next, deep in shade, some scores have been laid,
And when in my whole, you're not joking.

Concealed Geography

By way of recreation from work we present another installment of the ever-popular concealed geography where towns, countries, rivers, etc., are hidden in the different sentences.

133. I should be proud to entertain such a guest.

134. Shall we see the ghoul to-night?

135. Which do you prefer for lunch, clam, oyster or turtle soup?

136. We eat the melon, but the rind gets thrown to the pigs. (Country.)

137. From wax tapers I anticipate a great deal of pleasure. (Country.)

138. My brother, I enter your house with pleasure.

139. My high-wrought exasperation filled the enemy with utter dismay. (State.)

140. They only light their astral Sunday nights.

141. He rode to Plymouth on a ticket for Quincy.

142. The siege of Sebastopol gave the French much trouble.

143. Madam Parepa lost her voice on that occasion.

144. The amphibious monster crossed the river on a raft.

145. Sarah ought on all accounts to be remembered.

146. Poor Sambo got a whipping for running away.

147. The mustang I erroneously supposed peculiar to Mexico.

148. I must go somewhere for dinner.

149. Water I eat, bread I drink.

150. In trying to stop that animal I made a misstep and fell.

151. We must feed our cows with hay till next June. (Island.)

152. She wore a crêpe ruche on her neck. (Country.)

153. The Queen of the Adriatic or King of Abyssinia must reign.

154. At the great Anawan I celebrated the Fourth of July.

155. I have a hundred and one; I dare say you have a hundred and two. (Lake.)

156. To a man under age, no agreement is binding.

157. The best cows are Alderney.

158. I met my great-aunt on Washington street.

159. When the rain began to fall I made my friend put up her umbrella.

160. Our cook's name is Augusta.

A Strike Puzzle

When Smith bought a farm he engaged three foreigners to do the work, agreeing to pay the foreman one dollar and ten cents per day, the handy man one dollar and the helper ninety cents, so as to average one dollar per day. They contracted to perform one hundred and one days for three hundred and three dollars, but on the second day they formed a "Planters' and Diggers' Association," and asked for shorter hours with increased pay. Recognizing the justice of their demands, as explained by the entertainment committee, he increased the wages of two of the men so that every one was satisfied, and yet at the end of the season each man received one hundred and one dollars, and there had been just three hundred and three days' work done on the place by the three men.

A Rebus

My first is a sign of pain
Of sorrow or surprise;
My second it is plain
Within your kitchen lies.

My whole is found in Spain
'Neath genial Southern skies,
A fruit—but I'll refrain
And leave it in disguise.

Some Conundrums

At what age should a man marry? At the parsonage.

Why is the letter W like gossip? Because it makes ill will.

Why is an egg underdone like an egg overdone? They are both hardly done.

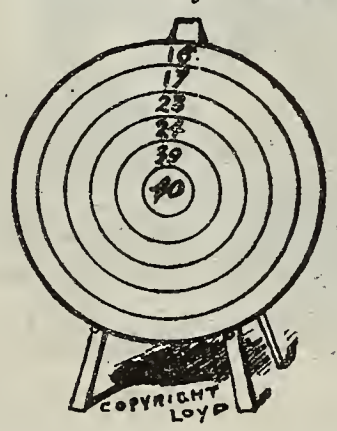
Why do the Salvation Army lassies walk on their heels? To save their soles (souls).

What benefit can be derived from a paper of pins? It will give you many good points.

When does the wind most resemble a bookseller? When it keeps stationary (stationery).

Why are authors who treat of physiognomy like soldiers? Because they write about face.

An Archery Puzzle



At a recent archery tournament Miss Nellie Smith of Wayne County won the first prize by the excellent score of one hundred. Can you tell just how many arrows she must have shot and how much each one counted?

Passing the Japanese Mines

The section of a chart of Japanese mines placed at the entrance to the harbor of Port Arthur is presented for the benefit of the young puzzlists, who are asked to show how a vessel might pass from the bottom to the top of the picture by changing her course but once. Draw a straight line from the bottom of the picture to a certain point, from which you can draw another straight line to the top, so that the two lines will indicate a safe channel through the twenty-eight mines or torpedoes.

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The Stubbornness of Grampa's Pa

By Eugene Wood, Author of "Back Home," "Folks Back Home," Etc.

Illustrated By Fred E. Lewis

When Grampa gets talking about how they used to farm it, when he was a little boy, he has many wonderful things to tell. For instance, they piled up great heaps of logs with an ox-team, and a chain wrapped around the log so that it would roll up to the top of the pile, big, big logs of oak and hickory and black walnut and curly maple, and then set fire to them. What! All that good timber wasted? Yes. What else could they do with it? They had more firewood than could ever be used, and they had to clear the land, and they had to get rid of the stuff some way. It's no use saying, it was a confounded nuisance.

"Grampa and the ox-team"

Well, you can see how it would be so, when the timber stood so thick that they had to fall the first row of trees toward the road; if they went the other way, they'd lodge. There was reason for nearly all the things they did that seem so foolish and wasteful to us now, the whole course of action of our ancestors who went at this country like a boy running through the money his daddy left him. They didn't look ahead into the future. Who does? Do you? And what has the future ever done for us that we should bother our heads about it?

But what is not easy to understand is why they were so mulish and obstinate. When Grampa was a little boy, they were just beginning to apply machinery that went around and around, driven by power, to tasks that had hitherto been done with back-and-forth actions of human muscles. Up to the time that Grampa was a little boy, they had been doing that way ever since Noah came out of the Ark, and I don't know but longer.

It is hard for us to realize that things aren't as they always have been, but the last hundred years have made more changes than any thousand years—yes, or any ten thousand years—before. I might as well own up now, and face the music, that I don't believe that Archbishop Ussher's chronology whereby he makes out that the world and the stars and all were 5914 years old on the twenty-seventh day of September, 1910, is the inspired Word of God. I think he just made that up. And so I say that there have been more radical changes in the way we live and move and have our being in the last hundred years than in any ten thousand years before. And, as I say, when Grampa was a little boy, that new epoch-making way of doing things by some other way than human muscle-power was just coming in. And Grampa's Pa didn't like it a bit. Huh-UH! He wouldn't have it around the place.

Grampa's Uncle Zan—his name was Alexander, but they nicknamed him "Zan"—was a regular up-and-coming man. As fast as some new labor-saving device came out Uncle Zan would buy it. He had a horse rake, but Grampa's Pa made Grampa rake the hay by hand, which is slow work and tedious work, especially for little boys ten or eleven years old. One day Uncle Zan fetched over his horse rake just to show Grampa's Pa how nice it worked and how it would get through the task in a jiffy. Well, perhaps not as quick as a jiffy is, but a good deal quicker than it could be done by hand. And it wasn't so tiring to Grampa, who was only a little boy then.

But all the good it did was to stir up a muss. They got to talking loud and arguing, and you know what arguing comes to, I hope. Grampa's Pa said it would just ruin the hay, and Grampa's Uncle Zan said, no, his hay when he used the horse rake was full as good if not better than when it was raked by hand. And Grampa's Pa said that wasn't much to go by, and when Uncle Zan asked him what he meant by that, Grampa's Pa said that if Uncle Zan must know, he didn't think much of it. He'd hardly call it fit for bedding, let alone to feed the stock. And from that they went on to other things, telling each other what they thought about the way they acted till Uncle Zan capped the climax by his very effort to smooth things over, for he said: "Now, Isaac, be reasonable—"

And, you know, that was just the same as saying that Grampa's Pa was a (you know) fool. For if Uncle Zan told Grampa's Pa to be reasonable, that meant that he wasn't reasonable, and a person that isn't reasonable is the kind of a person that Grampa's Pa said Uncle Zan said he was. It's kind of mixed up, I know, but Grampa's Pa said he wasn't going to be talked to that way by nobody, even if he was his wife's brother; not on his own land, anyways. And Uncle Zan was to get right off Grampa's Pa's land. And Uncle Zan said he thought that was kind of ungrateful after Uncle Zan had gone and raked his hay for him. And Grampa's Pa said that all the thanking he was going to do was to thank him to mind his own business and not go meddling with what was none of his concern, and: "Are you goin' t' git off my land or shall I have to take and put you off?"

Oh, they had a regular time of it. But Grampa's Pa triumphed at the last, for it was his land and he could order Uncle Zan off it. Uncle Zan might have triumphed at the first because he had a new-fangled kind of a horse rake, but Grampa's Pa triumphed at the last because he owned the land. And this was not the first instance in history, nor will it be the last, when private ownership of land has stood in the way of progress, and the gaining of the largest amount of crops for the least expenditure of energy.

And it was the same way about threshing the wheat. Grampa's Pa did that in the regular Scriptural way, like the pictures in the Pictorial Family Bible. He had a threshing-floor, the same as Araunah the Jebusite, the ground all leveled off, and the clay smoothed, and the sheaves of wheat thrown on it and trodden out by horses. He did use to have oxen, but horse-droppings are easier taken up when they fall on the wheat. So Grampa used to have to ride one horse and lead another 'round and 'round and 'round and 'round till he was completely tuckered, and then he'd have to keep on riding. And the men would toss the wheat up with scoop-shovels so that the wind would blow the chaff away, and the air would be thick with the dust. Phoo! After a while Grampa's Pa did yield a little and bought a fanning-mill to clean the wheat with, but it was worked by hand, and Grampa had to turn and turn and turn till he thought his arm would drop off, and then he'd change hands and turn and turn till he thought that arm would drop off, and so on for a young eternity.

Uncle Zan had a threshing-machine that went by horse-power, the horses going 'round and 'round, and grinding out the power that turned a wooden cylinder into which wrought-iron spikes had been driven. And one day the thing was going full tilt, and a fellow named John Foreshoe was tending it—you mind him, don't you? No, that's so. He moved out West before your folks settled here. Well, anyways, John was tending it when there was a big noise and zzzzngt! John heard something whiz by his head and go blam! against the barn, where it stuck in a board, and blame if it wasn't one o' them spikes out o' the cylinder in the threshing-machine. Little more and it would have hit John Foreshoe right spang in the head. And if it *had* hit him, he'd 'a' never knowed what hurt him; he would have been dead just that quick.

"If she had to wait to learn anything from him, she'd be a terrible long while in ignorance"

And you better believe Grampa's Pa had a few choice and select words to say when he heard about that. It just showed what folks got, he said, for trying to be so all-fired smart and knowing so much more'n anybody else. S'posin' it had killed Johnny Foreshoe, then what? And him married not quite a year and lookin' to be sent for any minute to fetch the doctor. Grampa's Pa wouldn't have that on his conscience, no sir! not for a thousand dollars. No, nor *two* thousand dollars. And Grampa's Pa hoped it would be a lesson to Johnny hereafter. And to everybody else.

Because—well, it's like this: To do your work by machinery, why, it was just plumb laziness, and that was all there was about it. Just trying to shirk and get out of doing an honest day's work. Never'd be any good farming done that way. There was no excellence without great labor, so Grampa's Pa said. Everybody knew that. Nobody could have the face to deny that. No excellence without great labor. And it stood to reason that the more labor, the more excellence. The more work you put on a thing, the better it was bound to be, and to try to get shut of the hard work was just scamping the job, that was all. And furthermore, it said that a body was to eat their bread in the sweat of their brow. And how could a body sweat, jist settin' there and lettin' the horses do the work? It was goin' against the Bible, so it was.

And just then Grampa's Ma spoke up and said that there wasn't going to be anybody eating their bread in the sweat of their brow around that house if she had anything to say about it. When there was a wash-pan outside and a crock of soft soap and a roller-towel and plenty of rain-water in the barrel at the corner of the house, even if there were a few wigglers in it, there was no excuse for anybody settin' down to a meal's victuals all sweaty. It might be Scriptural, but she wasn't going to have it. Not in her house that she had helped to buy with Pap's money. Now!

"Grampa had to ride one horse and lead another 'round and 'round"

And Grampa's Pa told her not to be presumptuous and meddle in matters that were too high for her. Paul said that the women were not to put in their gab where it wasn't wanted, but if they needed to learn anything they should ask their husbands. And Grampa's Ma said: Huh! If she had to wait to learn anything from him about the way farming ought to be done, she'd be a terrible long while in ignorance. And that it *was* her business, this thing of people coming to the table without washing up first. She never had allowed it and she wasn't going to begin now. And if Grampa's Pa wasn't so plegged obstinate and contrairy, and would be willing to learn a little and get good ideas from smart folks, like her Brother Zannie, maybe they could have a few little things once in a while, and the young ones have a decent dud to their backs without taking it out of her egg-and-butter money. Maybe it did say there was no excellence without great labor, but that didn't mean that a body was to make a regular slave of theirself when the horses could do it just as well as not. And labor meant head-work, too. She didn't deny but what Grampa's Pa was industrious enough, as far as that went, and willing and all that, but—

Oh, a whole string of stuff like that. You know. You've heard it often enough. Grampa's Ma could talk it off when she got started, but that's all the good it did her. Grampa's Pa was the boss, and that settled it. And he didn't have any of these new-fangled contraptions for the promotion of idleness till the day—till the day he had to, if he was going to keep up with the other farmers 'round about. It looked like economy not to spend your money for new-fangled contraptions when you had the old-fangled hand implements, but it really was extravagance. The innovations were expensive to install, but they paid interest on the investment, not only in money, but in life, for the more leisure you have, the less time you put in on the chore of making existence possible, the longer your real life.

Of course, that was a long time ago. Lots of water has run by the mill since then. Things have changed. Farmers are—about the same now as they were then, when it comes to taking up with new ideas. Grampa's Pa wasn't opposed to "new wrinkles," little, small innovations that come as wrinkles come, without much changing of the features. All he did was to fight the new age and its spirit of radical alterations. And there are progressive farmers to-day or who call themselves progressive who are satisfied to niggle at the thing, to make small improvements and to find out new ways of stacking hay or new ways to mash potato-bugs. All very good in their small way. But they fight the coming age, just as Grampa's Pa did. And they are going to be beaten just as Grampa's Pa was. For a new age is coming in agriculture.

If I knew more of practical farming than which end of the horse the hay goes in at, I shouldn't have the impudence to tell farmers their business. But just because I don't know more than that, I can be as bold

[CONCLUDED ON PAGE 21]

"Grampa's Pa made Grampa rake the hay by hand"

" 'Now, Isaac, be reasonable—' "

The Craig Conscience

[CONTINUED FROM PAGE 18]

"That yachting trip is entirely apart from the closing down of the mills," be began, but she cut him short.

"I know. Eleanor told me."

"Then you know what the whole thing means to me. The men blame me, of course. Sometimes I blame myself. You know what I hoped to accomplish when I took up the partnership offer."

"You thought you would be in a better position to help the men."

"Yes, and the other affair happened before I realized what it meant. I mean—Eleanor. And it was even her interest in the work at the club that first brought us together. I knew she would help me on many points—afterward. This closing down of the mills was simply something that could not be foreseen."

"How much would it take to cover the loss of running them?" asked Grace abruptly.

"Offhand, I should say about fifty or sixty thousand up to September. By then there will be a reaction, perhaps before."

"Fifty or sixty thousand," she repeated. "And the yachting trip?"

He met her gaze squarely this time and was silent.

"You see it doesn't balance up well, does it. Of course, your private affairs are nobody's business, but that is why Mrs. Leonard denounced the whole thing, and I don't blame her."

"You think that I ought to give up Eleanor?"

"Now, wait, wait, please," she exclaimed, holding up her hand. "I haven't said what I think, and it doesn't matter in the least. It is for you and Eleanor to work out that problem between you. This I do think, that it is perfect folly for you both, as Mrs. Leonard expressed it, to cocaine your consciences by playing at settlement work and getting the confidence of the men, when you ought simply to throw your own affair to the winds and keep those mills open all summer, even if it meant the loss of twice as much money."

"It means more that that," said Carteret. "It means the loss of her."

"What funny, childish little people we are, after all," Grace laughed. "When all is said and done, and all our altruistic theories are threshed out, it comes down to the same old personal equation, doesn't it?"

"I love her," retorted Carteret briefly. "But I know what you mean, and I am no coward, Miss Dudley."

There was a humorous twinkle about the head worker's eyes as she laid her hand in his. He had unconsciously used Eleanor's own words.

"I know you are not, but—don't be," she laughed. "Good-by. After all, I sometimes think there is nothing in life to be really afraid of except the temptation to turn traitor to ourselves. Good-by."

"Good-by," he said, and Grace saw him take the street leading up to the Craig home, whose gray stone cupola showed among the poplars and chestnuts on the hill.

Walking up that hill, Carteret fought out his last battle with himself. He had been among the mill workers for a couple of days. The previous night he had attended a sort of mass-meeting at Craig's own request.

"To get the other side's view of things," the older man had said. "We don't want any violence when a little quiet common sense and diplomacy may check it. Go and listen to them, John. Take in the atmosphere."

John had taken in the atmosphere that night to an extent amazing to himself. He had been recognized and let severely alone, which in itself showed the other side's view of things. And sitting there in the crowded hall, he had listened to the speakers with a mind that wavered back to his old allegiance. There had been the usual amount of abstract comfort handed out to the men, of what would happen to them under socialistic conditions, how such emergencies as the present one would be avoided, how it would be impossible for a man like Craig to personally affect the welfare of four hundred men and their families to the limit of privation.

And then suddenly the speaker had launched out flatly against John Carteret. He had given them plenty of assurances, plenty of promiscs that the mills would be kept open as long as there was money to run them. What had he to say now that they were closed down and there was no work to be had? That there was no money? The speaker laughed derisively. No more money, and Craig buying up steam yachts at thirty thousand for a midsummer cruise to Suez. No money, comrades?

Carteret had returned from the meeting with a very adequate idea of the other side's point of view. He had taken in the atmosphere and was able to transfer some of it to Craig himself. More, he also conveyed an intimation that when Mr. Craig returned, he might not find any mills to reopen.

Craig had not taken the information or the advice in good part. His bushy gray eyebrows had met, and his under lip closed over the upper one in a way he had.

"What are you going to do about it?" asked Carteret.

"Do?" retorted Craig. "We have done, haven't we? The mills are closed, aren't they? That's the answer. We knew they'd kick, but they'll get over it. You and Nell run along and get married, and stop worrying over this end of it. They'll cut out a lot of the bitterness when they find out the yacht's simply an adjunct of the honeymoon. They like Nell and you, too. She's been doing the settlement stunt for a couple of years and it pays. They won't burn the mills down. Don't you be afraid, John. I know them. It's a dead open and shut proposition, and I'm not going to let a lot of women and labor agitators stir up a sentimental storm out of it. I will attend to any cases of actual privation that come up, but I am not going to keep the mills open on a flatly losing basis from day to day, simply because a lot of club-women, and some barrel-top orators consider it my duty."

Walking up the hill to Craig's home, Carteret realized that out of the chaos of thought of the past three days his talk with Grace Dudley had left him one dominant thought. He had no right to marry Eleanor and accept Craig's gift when the men he had called comrades were facing starvation. By the time he reached Craig's door he knew his way ahead.

It was after six. Mr. Craig and Eleanor were still at dinner. He declined an invitation to join them, and sat down in a deep wicker chair out on the veranda to wait. It was late spring and twilight was just beginning to settle down over the valley.

All at once he heard Eleanor's step along the veranda. As she came near him, he saw that she had been crying. She wasted no words in getting to her point, simply held out his ring to him.

"I can't keep it any longer, John," she said, trying to keep voice and eyes loyal to her purpose. "It's no use trying to tell you why. Father won't understand and you can't. You will only think me foolish. But I don't want to marry you, and I won't go on like this any longer."

"You don't want to marry me." Carteret took the ring and turned it over and over in his hand interestedly.

"Do you know what the men are saying of you and father?" she demanded, ignoring his question. "Everybody says the same. And if you want the truth, I agree with them perfectly. There is money enough to keep the mills going, money that father has accumulated from profits here year after year, and the men know it."

"What has that to do with—this?" He held up the ring.

"It means that I hope father will take the money our wedding and the trip to Suez would have cost him and reopen the mills."

He was silent for a minute, then said quietly.

"I had come up to-night to ask him the same thing. Also, to relinquish my partnership with him."

"Because of your sympathy with the men, John?" she leaned toward him with a quick indrawn breath and sparkling eyes.

"I suppose that is at the bottom of it. I only know that I'm sick of the whole thing and I want to end it. I started in four years ago to accomplish a certain aim, and somehow I seem to have switched from the main road. I want to find my way back."

"That side line you switched to led up this hill, didn't it, John?"

They both turned at the cheerful, even voice behind them. Craig had stepped out on the veranda from the low open windows of the library. He was smoking an after-dinner cigar, and offered its mate to Carteret.

"No? You needn't be unsociable, John, just because you're holding that ring. I came out to tell you that Leonard just called me up on the 'phone. He says the men propose coming out in full force to-night and marching up here to tell me something that's on their mind. If I don't agree with them, Leonard says, they expect to burn the mills down. He's becn among them this afternoon."

"So have I," interrupted Carteret.

"Hear about the same thing, did you, John?"

"Just about."

"Agree with them, don't you, John?"

"Not with the violence, sir," said Carteret steadily. "But I sympathize with them on the question of reopening the mills. That is why I came up to-night. I want to give up my share in the affair."

"You mean in the mills or in Eleanor?"

"The mills."

"Going to help burn them down to-night, John?"

"No. I hoped to reopen them, by giving up the money our wedding and the trip would have cost you."

"Eleanor has been telling me the same thing over her dinner," said Craig, smoking placidly, his keen, half-closed eyes watching the outline of the mills against the saffron sky. "You seem to be in unison on the little point of the wedding. What are you going to do?"

"I want to go on with my work in earnest down at the settlement," answered Eleanor, in a low, resolute voice. "I want to try and live consistently with the principles I believe in."

"I want to go away and try to catch up with myself somehow," Carteret said. "I want to get the old outlook on life."

"Stand pretty well with the men, don't you, John?" asked Craig after a pause.

"I did." The answer was equivocal.

"Then I think it might help out a bit if you went down and headed off this thing. I expect Leonard up for a chat, and I don't want to be disturbed with a lot of hot-air talk, understand. As long as you and Nell have thoroughly made up your minds, why, we'll leave that side of the question out of it. I just told Leonard over the 'phone that I'd decided to open the mills Monday morning. You might tell the men the same thing. It will save matches and long speeches. Tell them, John, that if they burn them down to-night, I can't open them Monday morning."

He turned to go back into the house. Eleanor was leaning back against the veranda railing, her chin uplifted, her eyes closed, as she listened.

"I'll tell them, sir," said Carteret huskily, at the same time extending his hand. Craig shook it most heartily, and laughingly said:

"No occasion for sentiment, John. I'm not in that line. Haven't seen the evening papers, have you? The market took a flier to-day. New York wired us about four, too. We can reopen without any risk. Thoroughly made up your minds about the yacht?"

There was no answer. Craig glanced at the two averted faces and felt a curious pity for youth and its extremes of light and shade, joy and bitterness.

"I spoke to Mrs. Leonard over the 'phone, too," he added with a chuckle. "Told her she had better keep the flour for general settlement work. Grace Dudley was with her. Sensible girl, mighty level headed. Grace said she thought they'd keep the flour. She said she never believed in finality. John, I like that sentiment. I don't either. There's no such thing, is there?"

"I hope not, sir."

After Craig went into the house, the two stood there in the shadows alone. Carteret stood in silence, waiting. The girl's back was toward him. One hand, the left one, hung at her side. He stepped over and lifted it, slipping the ring back in its place.

"There might be a wedding without a yacht, dear," he said. "Do you believe in finality?"

Eleanor turned swiftly, her hands reaching toward him.

"No," she breathed. "No, no, no."

The Stubbornness of Grampa's Pa

[CONTINUED FROM PAGE 20]

as brass and blat out what I think, which is: Farming is too much of an art and not enough of an industry.

When Grampa's Pa was a little boy, all of the other industries were arts and called for special skill and judgment and even courage. And they were all liable to what the ship's articles call "acts of God," which prudence can not foresee, nor skill avoid, nor courage carry you through. When Grampa was a little boy, they were just beginning to take these other industries out of the realm of personal skill and management, out of the realm of chance and into the realm of scientific certainty. That task is well-nigh accomplished for the other industries, and it looks to those who are little boys now that it must have always been that way. But it wasn't. It was just as hard for the folks when Grampa was a little boy to turn an art into an industry as it looks to be nowadays to change agriculture from an art into an industry. But it was a ground-hog case. It had to be. The products of these other industries were too much needed to be dependent upon personal skill and chance.

Just as there are little one-horse farms to-day operated by the owner (subject to a mortgage) with not enough money really to do with, insufficient and inefficient implements, and a small and unreliable labor-supply, so there were, when Grampa was a little boy, a lot of one-horse industries in exactly the same fix. Their operators, who owned every hammer and every crooked nail there was about the place, fought against the new device of joint stock ownership by which alone an industry could get sufficient and efficient implements, enough money to do with and a dependable labor-supply. They fought against that new device just as Grampa's Pa fought against the new device for threshing wheat. And they got licked, the same as he did.

Somebody is going to discover one of these days that a big tract of land under one expert management, with scientific methods and practising such economies as are only possible when enterprises are carried on on a large scale, with work so laid out that any kind of a laborer can do the special thing he has to do, will yield more than the same amount of land cut up into small farms under haphazard methods.

* * *

Ducky

My mother calls me "ducky,"
I used-to didn't care,
But since I've seen my grandpa's ducks,
Whose mother is a hen that clucks,
I think it isn't fair!

For grandpa's ducks are foolish,
And don't know what to do!
They walk all day in single file—
I s'pose it is a pretty style,
Still it seems silly, too.

And when the ducks go swimming,
The old hen clucks around;
She runs at me and tries to pick,
And fusses up her feathers thick—
She's scared they'll all get drowned!

My mother calls me "ducky"—
But she says *sure* that when
I learn to swim, she won't get mad
Or run around. Oh, gee! I'm glad
My mother's not a hen!

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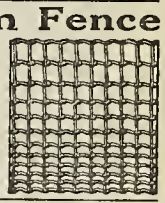

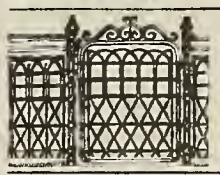

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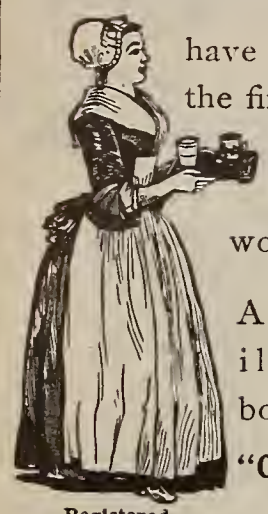

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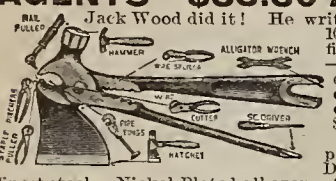

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WISE WORDS
A Physician on Food

A physician, of Portland, Oregon, has views about food. He says:

"I have always believed that the duty of the physician does not cease with treating the sick, but that we owe it to humanity to teach them how to protect their health, especially by hygienic and dietetic laws.

"With such a feeling as to my duty I take great pleasure in saying to the public that in my own experience and also from personal observation I have found no food to equal Grape-Nuts, and that I find there is almost no limit to the great benefit this food will bring when used in all cases of sickness and convalescence.

"It is my experience that no physical condition forbids the use of Grape-Nuts. To persons in health there is nothing so nourishing and acceptable to the stomach, especially at breakfast, to start the machinery of the human system on the day's work.

"In cases of indigestion I know that a complete breakfast can be made of Grape-Nuts and cream and I think it is not advisable to overload the stomach at the morning meal. I also know the great value of Grape-Nuts when the stomach is too weak to digest other food.

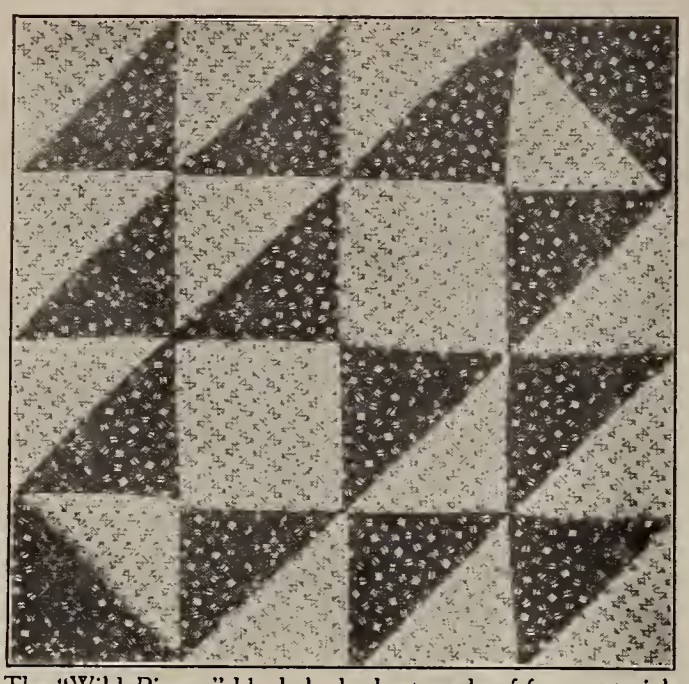
"This is written after an experience of more than 20 years, treating all manner of chronic and acute diseases, and the letter is written voluntarily on my part without any request for it."

Read the little book, "The Road to Wellville," in pkgs. "There's a Reason."

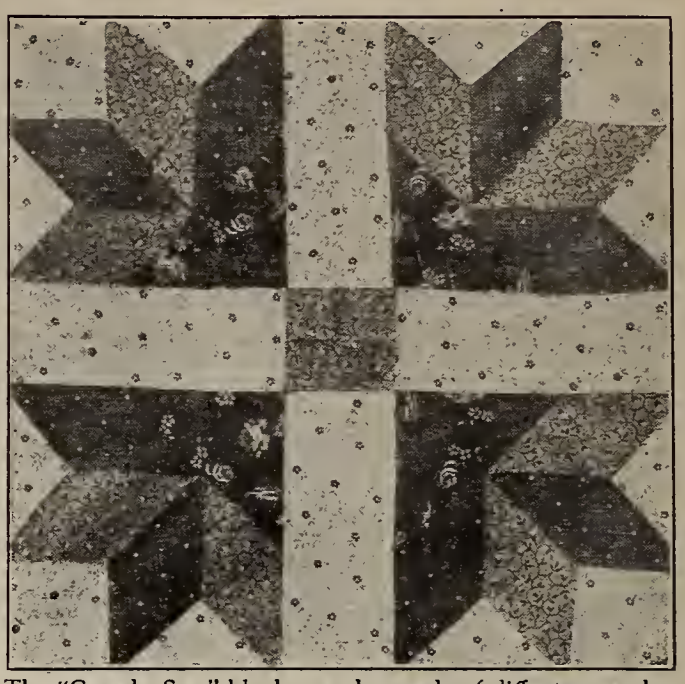
Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Old-Fashioned Patch Quilt Designs

By Charlotte F. Boldtmann



The "Wild Pigeon" block looks best made of four materials



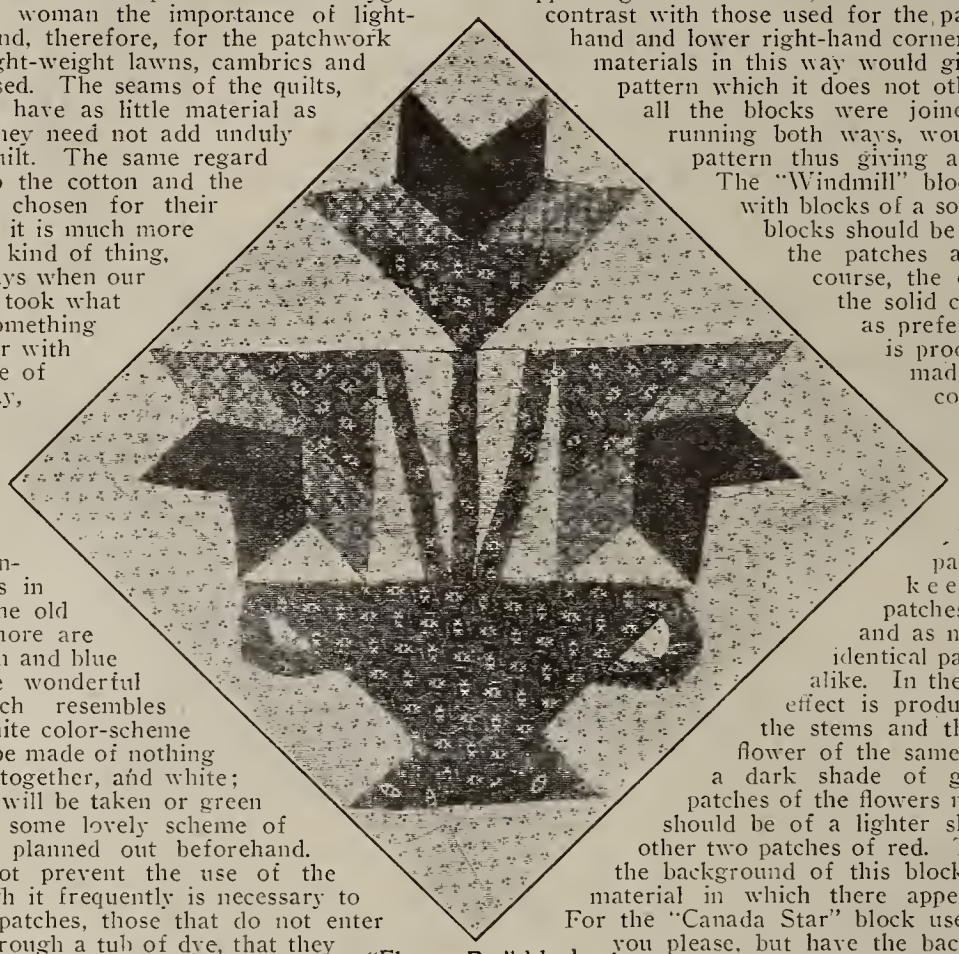
The "Canada Star" block may be made of different patches

THE old-fashioned patchwork quilt is being revived, and those of us who have inherited none from our grandmothers are looking about for some of the old designs, to make quilts of our own. In many ways the new quilts are better than those that are inherited. Some important changes are being made, for the old-fashioned quilts, with their glorious riot of color, are in many, many cases too heavy to be healthful. We of to-day have learned that he who gets up cross in the morning may easily do so because his bed has not been right and his health has suffered in consequence. Modern hygiene has taught the modern woman the importance of light-weight bed coverings and, therefore, for the patchwork quilts of to-day only light-weight lawns, cambrics and kindred materials are used. The seams of the quilts, withal strong and firm, have as little material as possible in them, that they need not add unduly to the weight of the quilt. The same regard for health is applied to the cotton and the lining, which are first chosen for their lightness. In these days it is much more possible to get the right kind of thing, of course, than in the days when our grandmothers, perforce, took what they could get, usually something made for utility and wear with machinery that had none of the perfection of to-day, and without any regard to the effect on health or temperament.

There is another important difference between the modern quilts and those of a generation ago, and that is in the matter of color. The old disregard is gone; no more are red and yellow and green and blue assembled to make the wonderful mixture that so much resembles Joseph's coat, but a definite color-scheme is planned. A quilt will be made of nothing but blues that tone well together, and white; or all the green patches will be taken or green and red and white; or some lovely scheme of color that is definitely planned out beforehand. This, however, does not prevent the use of the patches in hand, although it frequently is necessary to put the lighter colored patches, those that do not enter into the color-scheme, through a tub of dye, that they may take upon themselves the right color, in darker or lighter tone. For the tone is of slight importance, so long as it blends properly. It is harmony that counts.

In some blocks only two materials should be used, if the proper effect is to be secured. An example of this is the "Saving" block, so called because the pieces that fall from the center figure of one block form the corner pieces of the next block. In the illustration four blocks are shown, and one can easily see how ineffective would be the result were the center figures not made exclusively of two alternating colors. One might, however, disregard the economy implied in the name of the block, and use two other contrasting materials for the side pieces of the blocks. If this is done, the circles or the side pieces of the blocks should be made receding colors, like blues or greens, and the center figures of the blocks of red and white or some other colors that will give a raised effect.

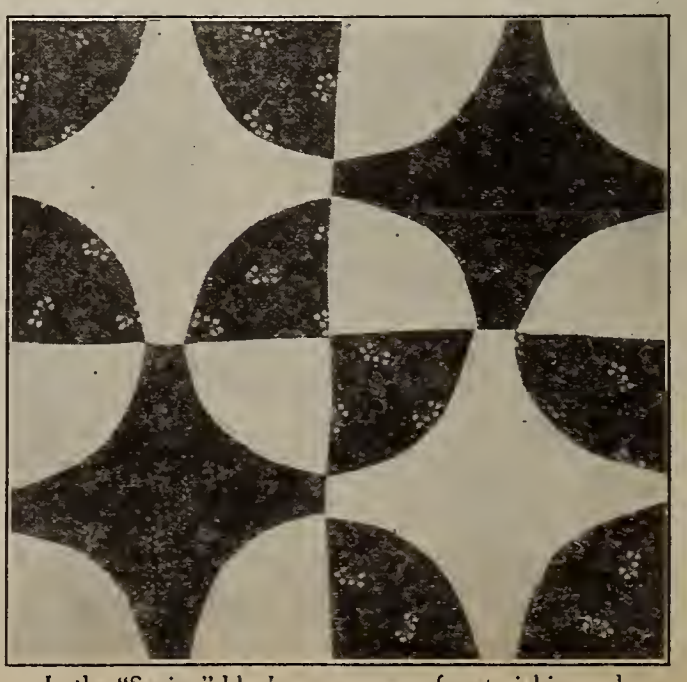
The "Wild Pigeon" block is another pattern that should be carried out with two materials, although here, too, an excellent effect is produced if the center series of patches, running diagonally across the block from the lower left-hand to the upper right-hand corner, are made of two materials which contrast with those used for the patches in the upper left-hand and lower right-hand corners. The use of different materials in this way would give a definiteness to the pattern which it does not otherwise have, and when all the blocks were joined the diagonal bands, running both ways, would form blocks in the pattern thus giving a rather pleasing effect. The "Windmill" block should be alternated with blocks of a solid color, and these solid blocks should be of the same material as the patches around the cross. Of course, the cross may be dark and the solid color light or vice versa, as preferred, but the best effect is produced when the cross is made of white or some light color and the solid parts of green or blue, receding colors on which the crosses will stand out in relief.



"Flower-Pot" block

In the "Flower-Pot" block a variety of patches may be utilized, keeping the background patches of all the blocks alike, and as much as possible making identical patches of different blocks alike. In the flower-pot the prettiest effect is produced by having the pot, the stems and the lower patch of each flower of the same material, preferably in a dark shade of green or brown. The patches of the flowers next to this lowest patch should be of a lighter shade of green, and the other two patches of red. The patches which form the background of this block may be of any white material in which there appears a tiny red figure. For the "Canada Star" block use as many materials as you please, but have the background patches of all the blocks alike. Otherwise all kinds of odds and ends may be employed, taking care to avoid the use of too much variety of colors which do not combine very well. A most effective block, where the color combination shows exceedingly good taste, is one made of squares cut into two triangles, the lower one of white material and the upper one of delft blue material. This combination is very attractive and the design is an extremely easy one to follow out. The same pretty effect is obtained, whether this quilt is made of expensive silk patches of blue and white or of inexpensive pieces of percale, lawn, gingham, cambric or other wash goods.

The "Windmill" used alternately with solid color blocks



In the "Saving" block every scrap of material is used

THE HOUSEHOLD

About Preserving Eggs

A NOVEL method of preserving perfectly fresh eggs—that is, before the germs have developed—is announced in a recent issue of the *American Grocer*, by Dr. Henry Novak, one of Chicago's leading chemists. Articles of food, such as fresh meats, eggs, fruit or those which are liable to decay quickly, will, when dipped in skim-milk, become coated with an almost invisible film that is said absolutely to keep out germs, air or water and is indissoluble in water and impervious to acids.

This effect is due to the properties of the casein in the skim-milk. Professor Fleischman, the distinguished chemist, says: "Casein when separated and dried, forms a hard, horny and elastic mass, which can be used in different ways, and when combined with oxids and salts of the metals of the calcium group, casein forms a cement-like compound, insoluble in water."

To Wash Chamois Gloves

WASH in warm suds and rinse in water of the same temperature, to which is added olive-oil in the proportion of a tablespoonful to a quart of water. When dry they will be soft and "as good as new."

Care of Meat

WHEN the steak is brought from the market, remove it immediately from the paper in which it is wrapped. Many an inexperienced housekeeper has allowed a fine steak to spoil by leaving it in the paper, which absorbs the juice, as well as imparting its own flavor.

An Up-to-date Farm-House

TWO years ago we moved to the country. This had been our aim for some time, but we were not just prepared because, when the time came, we intended to build the "house of our dreams"—a house with all the modern improvements that make for comfort and convenience. We had a certain amount of building-material on hand. In order to use this, it necessitated our making the dimensions of the house twenty by thirty-four feet. We felt that there were three essentials—a pantry, a bath-room and a fireplace. With these ideas, we began the work and I am sure we have made every combination of rooms out of this space that we possibly could. We lived in the house for six or eight weeks before the foundation was even started. Doors and windows were placed according to the wall space they allowed, as well as for their real use.

The Bath-Room

But the real achievement is the bath-room, and my sole reason for writing this is to tell the readers that a water-system is not necessary to a bath-room. The cost was a trifle and the bath-room serves the purpose just as well as though the whole thing had cost five hundred dollars, instead of a fraction of it. The tub is steel enameled. It drains into a tile ditch that crosses the front yard. The water for the tub is supplied from the cistern pump in the kitchen sink. The reservoir on the range furnishes the hot water and the range also heats the bath-room.

I have told many of my neighbors about the tub and the sink with the pump in the house. Many of them object to the idea, thinking that it is an unsanitary arrangement. For years I have been a teacher and a student of domestic science. I am finical about sanitation and can assure you that a year's trial of this plan of mine has proved it to be satisfactory. The sink drains into a tile ditch crossing the back yard. It joins the one from the front about fifty feet from the entrance of the sink drain. I give them the same care that I would give to a sink and tub installed with a regular water-system.

The cost was as follows:

Tub	$ 6.00
Pipe for pump	1.70
Pitcher pump	80
Porcelain-lined sink	2.40
Drain pipe for sink	35
Drain pipe for tub	25
Tile	90
Work	5.00
Total	$17.40

The "work" includes estimate for the ditch. It was all done by the man of the house during leisure moments, and I have given a price which I think is a fair recompense for his labor. We think our plan a very good one, and thus far has been entirely satisfactory. M. R.

Hints for Housewives

To get rid of ants in the pantry, wash the shelves off with hot water in which has been dissolved as much alum as the water will take up. If this doesn't bring results, sprinkle red pepper in all crevices.

Never allow canned goods to remain in the tin if only half has been used. Empty it out in a dish and keep until needed. The air entering the can is apt to make the canned food poisonous.

Keep a small whisk-broom in the kitchen sink to wash all your pots and pans with. It removes sticky substances much more easily than a cloth and makes it unnecessary to put your hands in water during the process.

To remove grease-spots from carpets, use a thick paste made of fuller's earth mixed with a little ammonia. Apply it lavishly and let it remain overnight. Then brush off with a stiff brush. If the spots have not entirely disappeared, put on a second application. When the colors of the carpet are delicate, the ammonia may be omitted and water used instead. If the tone of the carpet seems dull after the grease is out, freshen it up by sweeping with moist salt.

Ink-stains can be removed from black walnut or mahogany by touching the parts very lightly with a feather dipped in a solution of niter and water—eight drops of niter to a tablespoonful of water. If the first application does not prove efficacious, repeat. Wash off the niter with a cloth wet in cold water. If the stain is very obstinate, make the solution stronger with niter.

Salve for Burns

A GOOD salve for burns is made by melting together a tablespoonful of lard and a lump of resin about the size of a nutmeg. Stir briskly and when you remove it from the fire, add a tablespoonful of turpentine. Apply to the burn with a soft cloth. As the turpentine evaporates rapidly, the salve should be kept sealed.

Bronchial Troches

TAKE a quarter of a pound of good extract of licorice, a half pound of very fine sugar, one half ounce of powdered cubebs, one ounce of gum arabic dissolved in as little water as possible. Mix and cut up in small pieces. These are good for a cough or for throat affections. Ingredients may be obtained from any druggist.

Home-Made Vinegar Without Cider

TAKE a gallon of corn-meal and boil in water until it is soft; put it into a ten-gallon barrel and fill with strong molasses and water. (I prefer sorghum or sugar house molasses.) Two gallons of molasses will be about the right quantity. Leave the bung out and tack a piece of cloth over the hole. In a short time it will be good vinegar. If it should be too weak, more molasses and water can be added or the washings of vessels that have contained honey or molasses may be poured into the barrel as they accumulate. Rain-water is best to use. The use of a piece of "mother" will hasten the making. As soon as the vinegar is made it should be racked off or strained and put into clean vessels or the same barrel may be washed out and used.

Vinegar From Apple-Parings

A product as good as the best cider-vinegar may be made from the parings of apples and peaches as well as grape-pulp. Put these parings into a barrel or stone jar and cover with rain or cistern water. A galvanized or tin vessel is not suitable, as the acid will eat off the coating. After it has been in this vessel for several days or until fermentation sets up, and before the parings begin to soften, strain off the liquid part into a barrel or even into a barrel containing some old vinegar or some made by the above process. This will make vinegar quicker than pure cider, and the addition of molasses and water will make it stronger. A little vinegar "mother" will always help in the making. If it should chance that one hasn't the apple-pcelings, an apple flavor may be given to vinegar by boiling some dried apples, pouring water over them and allowing to stand a day or two; then strain off and add to the vinegar. By saving the parings and rinsing all vessels containing honey, molasses and sugar syrup with clean water and pouring into the vinegar-barrel, almost any housewife may have vinegar of the best quality.

H. F. GRINSTEAD.

Some Good Recipes

GOLDENROD TOAST—Toast ten slices of bread and butter on one side. Pour over it the following batter made thus: One and one half teacupfuls of sweet milk, one heaping teaspoonful of flour. Cook in a saucepan until it is the consistency of smooth cream. Butter the size of a walnut is added and salt to season. Have ready three eggs which have been boiled twenty-five minutes. Chop the whites very fine and add to the batter. Pour all over the toast. Rub the yolks through a collander and sprinkle it over the batter. This is delicious.

Bread-Pancakes

SOAK one pint of bread-crumbs in hot water until perfectly soft, then squeeze out all the water possible. Add two ounces of melted butter, a pinch of salt and two ounces of flour sifted with one teaspoonful of baking-powder. Beat two eggs well and stir them into half a pint of milk and beat them into the crumb mixture. Fry in hot butter and serve as soon as cooked, dusted with powdered sugar or spread lightly with preserves or jam.

Cranberry-Relish

TO THREE and a half pounds of brown sugar add two cupfuls of best vinegar, two tablespoonfuls each of ground cinnamon and allspice, and one of cloves. The spices should be tied in a little piece of muslin. Boil all together to a syrup, then add five pounds of cranberries and simmer very slowly for four hours. Keep closely covered in a stone jar. This is most appetizing with cold fowl or meats.

Chocolate-Macaroon Pudding

ONE pint of cream, one tablespoonful of granulated gelatin, six macaroons and one quarter of a pound of sweet chocolate. Soften the gelatin in a little cold water, then pour on it a quarter of a cupful of boiling water to thoroughly dissolve it. Add the whipped cream and stir. Then divide the mixture into two equal parts. Into one stir the sweet chocolate, which has been grated, and stir the macaroons, which have been pounded quite fine, into the other half. Lay the two mixtures alternately in a glass dish, and place on ice for at least an hour before serving.

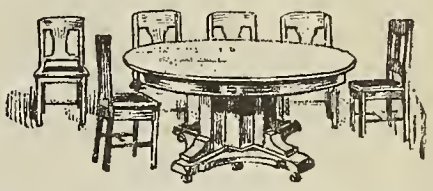
Cheese-Cakes

MELT one pound of cheese in a saucepan, add half a cupful of rich cream and half a tablespoonful of butter. Mix well and stir in one cupful of chopped pecan-meats. Pour into a shallow dish, and when partly set form into little balls with spoons or butter-paddles. These must be made a day or so before they are eaten.

Creamed Eggs

BOIL eggs for twenty minutes and make a cream sauce. Prepare a slice of toast for each egg. Put on a baking-dish and pour some of the sauce over it; next place a layer of the whites of the eggs which have been cut in thin narrow strips and sprinkle with a part of the yolks, which have been rubbed through a sieve. Repeat by layers and finish with a thick layer of sauce. Three minutes in the oven will make it ready for the table. Garnish with parsley.

$77.00 Dining Set for $34.00



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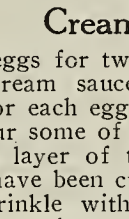

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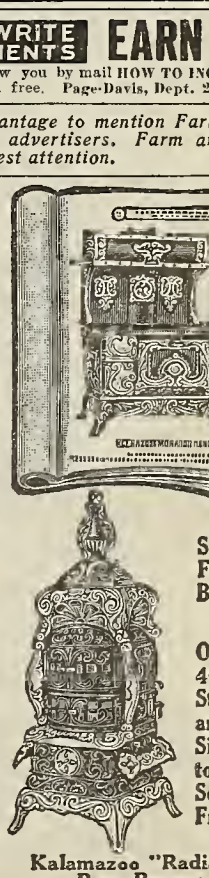

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"Slowly I was forced to admit the truth and the final result was that my whole nervous force was shattered.

"My heart became weak and uncertain in its action and that frightened me. Finally my physician told me, about a year ago, that I must stop drinking coffee or I could never expect to be well again.

"I was in despair, for the very thought of the medicines I had tried so many times, nauseated me. I thought of Postum but could hardly bring myself to give up the coffee.

"Finally I concluded that I owed it to myself to give Postum a trial. So I got a package and carefully followed the directions, and what a delicious, nourishing, rich drink it was! Do you know I found it very easy to shift from coffee to Postum and not mind the change at all?

"Almost immediately after I made the change I found myself better, and as the days went by I kept on improving. My nerves grew sound and steady, I slept well and felt strong and well-balanced all the time.

"Now I am completely cured, with the old nervousness and sickness all gone. In every way I am well once more."

It pays to give up the drink that acts on some like a poison, for health is the greatest fortune one can have.

Read the little book, "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

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OUR YOUNG FOLKS

Conducted By Cousin Sally

The Letter-Box

MY DEAR COUSIN SALLY:—
I received your button and think it very nice. I have tried to get my chums to join, and I think they will very soon.

Near our home is a spring about thirty feet across and the mosses growing up from the bottom give it a greenish-blue tint. It can be seen very plainly when the sun is shining and is called "Blue Hole." It has two outlets, one which runs past our farm and forms a falls, which once turned the wheel of a flour-mill, but the mill has been burned down. No one ever learned the cause of its burning.

Your cousin,
MARGUERITE NEUSCHELER.
Castalia, Ohio.

DEAR COUSIN SALLY:—
I received the lovely club button which you sent me and also your letter; thank you very much for them. I think this is a very nice club and I promise to be a loyal member. Cousin Sally's letter about the little girl and the dog was so pretty. I think we all ought to be kind to dumb animals. I have not taken part in any of the contests yet, but I will soon. I would like to exchange post-cards with some of the cousins. I will return all favors. Wishing our club success,

Your faithful cousin,
L. M. VIGIL SANTO.
Thunder Hill, British Columbia.

DEAR COUSIN SALLY:—
I received your letter and button yesterday. I help my mother with the housework. After dinner and supper I wash the dishes and sweep the kitchen, and my big sister sweeps the dining-room.

Our club button is lovely. Many of my friends have asked me what the monogram stands for, and I tell them "Cousin Sally's Club." Is it not true? I do not want to give my motto away. I like to keep secrets. My sister does not belong to the club, but I tell her that she can't find out what our motto is unless she joins, too.

Well, I must close. Lots of love to you and the cousins. MARION LOWE,
Berkeley, California.

Winners in August 10th Contest

JULIA BOWLER, age fourteen, Independence, Ohio; Catherine Dague, age fifteen, New Portage, Ohio; Lewis Davidson, age thirteen, Province, Quebec; Helen Smuck, age ten, Converse, Indiana; May Anderson, age fourteen, Thornton, Idaho; Grace Mann, age thirteen, East Whittier, California.

Geographical Puzzle

HERE is an interesting puzzle which you boys and girls may like to work out after your day's lessons are studied. The answers are the names of some of the states in the Union. The first one is Rhode Island. Now see if you can guess the others. The answers will be printed in our next issue.

1. Past tense of ride and a certain formation of land.
2. An outdoor game and to perceive.
3. A maiden and two vowels.
4. Part of a rainbow, first letter of alphabet and to perform.
5. That which is done in a laundry and two thousand pounds.
6. A boy's name and two vowels.
7. An aboriginal inhabitant of America and the first letter of the alphabet.
8. A girl's name and to disembark.
9. Recent and a shire of England.
10. Rubicund and a vowel.
11. A direction, a song of a bird, contained and a vowel.
12. A place for swine, pertaining to woods and two vowels.
13. Sick, a personal pronoun and a din.
14. Recent and a kind of cloth.
15. An exclamation, elevated and the first syllable repeated.
16. Something that is mined, seventh letter of the alphabet and a preposition.
17. An adjective that means the principal part of. ISOLENE K. MILLS.

Honor Roll

ROSA LASSWELL, age fifteen, Madison, Idaho; Mabel Sprague, age fourteen, Berea, Ohio; Grace Van de Carr, age eleven, Redlands, California; Kerrina Estelle Rose, age ten, Haverhill, Ohio; Virginia Skinner, age thirteen, Prince Frederick, Maryland; Kenneth H. Ford, age ten, Crescent Heights, Canada; Eloise Case, age fifteen, South Royalton, Vermont.

Cousin Sally's Club

WE HAVEN'T had much space lately to talk about our big club, have we? But, nevertheless, every day brings lots and lots of new members. The buttons are still for sale and cost only five cents. Join to-day. The club is only for boy and girl readers seventeen years of age and under. In writing, state your name, age and address. Send your letter to Cousin Sally's Club, FARM AND FIRESIDE, 11 East 24th Street, New York City.

COUSIN SALLY.

The Little Sister

By Laura Spencer Portor

When mother's very busy
With baking bread or cakes,
She lets me sit by baby
And watch her till she wakes.

Then I stay very quiet;
Oh, very still I sit;
And I rock the cradle gently,
A little *weenty* bit.

But she is off in Fairyland,
Where babies go, they say,
When they're asleep. Sometimes I think
"Oh, what if she should stay!

"What if she liked the fairies
So well, she'd rather be
With them than to come back again
To mother and to me!"

But baby wakes at last and stares;
And then—she understands!
She's glad to be with us again,
And coos and claps her hands.

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Fall Fashions Worth Copying

Designs By Miss Gould

No. 1579—Box-Plaited Dress With Guimpe

Pattern cut for 4, 6, 8, 10 and 12 year sizes. Quantity of material required for medium size, or 8 years, three yards of thirty-six-inch material, or two and five eighths yards of forty-four-inch material, with one and one half yards of thirty-six-inch material for the guimpe

To the busy mother of the little school girl it seems as though her ever-growing daughter was constantly in need of a new dress. For this reason she is a wise mother who does not put too much work into these little frocks. Of course, she wants them to be stylish and up-to-date, but she does not want to be always sewing. Illustrated on this page are two simple dresses for the little daughter. They are stylish, too, yet both can be very easily made. No. 1579 has the waist and sleeve cut in one, which, as well as being the fashion of the hour, saves a great many stitches and a great deal of fitting. The other little dress, pattern No. 1582, that buttons down the front is another model that combines style and simplicity.

The Fall Catalogue of Madison Square Patterns

You are planning your winter wardrobe. To help you choose what is stylish and yet practical, you should send for the new catalogue of Madison Square patterns. It shows all the newest and best fashions for fall and winter for mothers, school girls and the little folks at home. All orders for this catalogue should be sent to the Pattern Department, Farm and Fireside, 11 East 24th Street, New York City. Its price is but four cents, and for every design illustrated in this big fashion book, there is an easy-to-use ten-cent paper pattern.

We have a liberal offer to make you in regard to these patterns. Here it is: We will give one Madison Square pattern if you send us only one new yearly subscription to Farm and Fireside at fifty cents. The subscription must be for some one not now a subscriber to Farm and Fireside. Send orders to the Pattern Department, Farm and Fireside, 11 East 24th Street, New York City.

Follow these directions when ordering patterns: For ladies' waists, give bust measure in inches; for skirts, give waist measure in inches; for misses and children, give age. Don't fail to mention the number of the pattern. Satisfaction is guaranteed.

No. 1582—Plaited One-Piece Dress

Pattern cut for 6, 8, 10 and 12 year sizes. Quantity of material required for medium size, or 8 years, six and one half yards of twenty-four-inch material, or four yards of thirty-six-inch material, with one half yard of velvet, heavy crash or suede for trimming

A gown that will especially appeal to the busy housewife is illustrated in pattern No. 1656. Its special feature is that both the waist and skirt button down the middle of the front, through a hem, making the dress very easy to slip on when in a hurry. The skirt is cut on the new straight lines, and the whole dress when made of one of the pretty flannels, ginghams or percales, looks most attractive. It is cut in an unusually large number of sizes, so that the very stout woman will be able to have just as trim and stylish a house dress as her slimmer, more easily fitted sister. It is also a very economical pattern to buy, for both waist and skirt are included in pattern No. 1656, which may be bought for only ten cents.

No. 1583—Double Waist With Kimono Sleeves

Pattern cut for 32, 34, 36 and 38 inch bust measures. Quantity of material required for medium size, or 36 inch bust, three and one eighth yards of twenty-four-inch material, or one and seven eighths yards of thirty-six-inch material, with two and five eighths yards of twenty-four-inch material for the guimpe

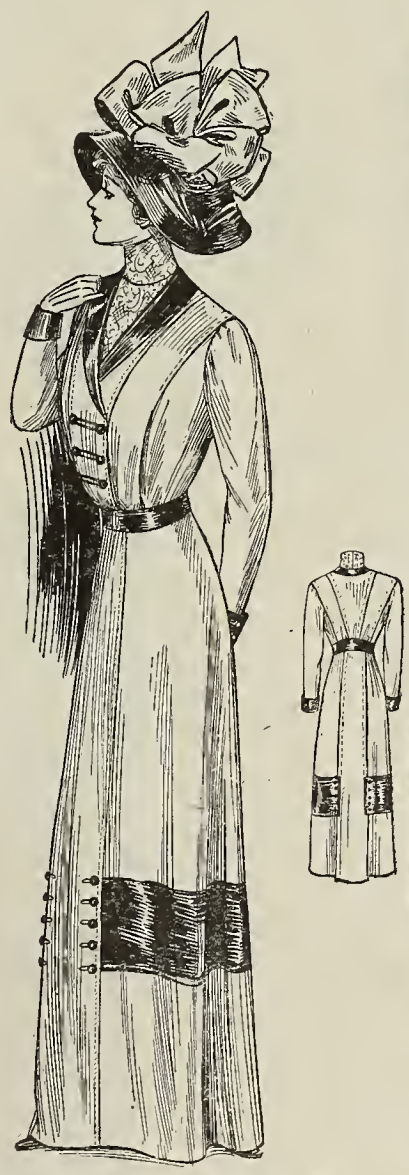
No. 1584—Skirt With Plaited Side Gores

Pattern cut for 22, 24, 26 and 28 inch waist measures. Length of skirt all around, 41 inches. Quantity of material required for medium size, or 26 inch waist, eight and three fourths yards of twenty-four-inch material, or five and one half yards of thirty-six-inch material

No. 1656—Housework Dress

Pattern cut for 32, 34, 36, 38, 40, 42 and 44 inch bust measures. Quantity of material required for medium size, or 36 inch bust, ten yards of twenty-seven-inch material, or seven and one fourth yards of thirty-six-inch material

Two attractive gowns which follow all the requirements of the new French styles, yet are very practical for the many needs of the American woman, are shown on this page. No. 1583 and No. 1584 is the first of these. Here we have the very fashionable waist and sleeve in one and the very new skirt, showing the latest way of introducing plaits in groups at the sides. Pattern No. 1657 and No. 1658, though very different in style, is equally modish. The waist shows the new jacket model, double-breasted and with shawl collar, and the skirt, Paris' favorite way of using the wide band of a contrasting color. This band no longer holds the skirt to the figure in an ugly manner, but conforms to its lines, which in themselves are very straight and moderately narrow.



No. 1657—Double-Breasted Waist

Pattern cut for 32, 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, three and three fourths yards of twenty-two-inch material, or two and one half yards of thirty-six-inch material, with three eighths of a yard of all-over lace and three fourths of a yard of velvet

No. 1658—Skirt With Band Trimming

Pattern cut for 22, 24, 26, 28 and 30 inch waist measures. Length of skirt all around, 42 inches. Quantity of material required for medium size, or 26 inch waist, eight yards of twenty-two-inch material, or five and one fourth yards of thirty-six-inch material, with one yard of velvet

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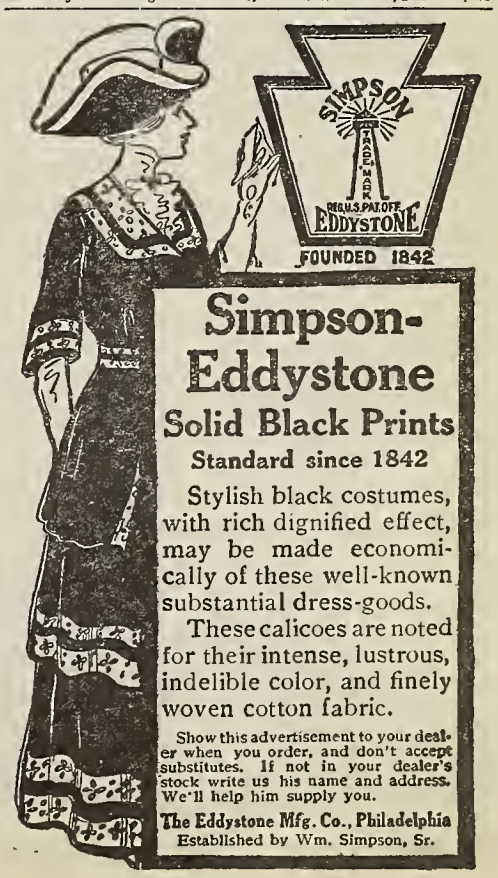

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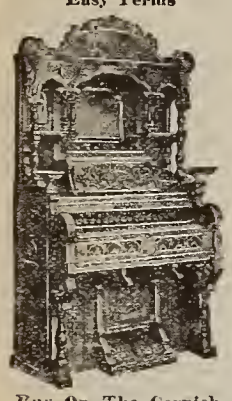

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A Country Church That Has Made Good

By M. B. McNutt

EDITOR'S NOTE—This is the first of a most interesting series of articles about a country church that has made good. Ten years ago one of the oldest churches in Illinois was going to rack and ruin. To-day it is in a most flourishing condition, a conspicuous example, in fact, of what one man can do. But it was an unusual man who brought about this marvelous transformation—a man of courage, force, ingenuity and dogged persistency. This man is the present pastor of the DuPage Township church. Just how he brought about such wonderful results will be described in his articles which will appear exclusively in Farm and Fireside.

CHAPTER I.

THE spirit of the age more than ever before demands results. Men want to see returns for the outlay of their time, energy and money. Even in religious matters people no longer have patience with monotony, inefficiency and unfruitfulness. This bold new spirit now dares to ask about so venerable and sacred an institution as the church, "What good is it?" and the question is justifiable, for in many places the church does seem to have outlived its usefulness. Especially is this true in rural communities and towns.

On the other hand, when the value or the worthlessness of a thing or an institution has once been satisfactorily demonstrated, this same skeptical spirit is quite as ready and willing to affix its seal of approval or disapproval, as the case may be. This age demands usefulness.

Circumstances sometimes bring a good thing into disrepute. Every farmer knows that when he plants the same kind of potatoes for many years in succession, the stock runs out.

Many a country church has flourished for a time under a certain program. But it often happens that a firm program is kept in operation long after the conditions that called for it have passed away and new conditions arisen that demand new methods and new equipment. The result is a misfit. The institution, therefore, is thought to have outlived its usefulness. The time has passed when people will support a church just because it is a church. It must make good.

This country church that made good is located in DuPage Township, Will County, Illinois, thirty miles west of Chicago and six miles from the nearest railroad station. No village surrounds it—the church and manse stand alone on the open prairie. There is a German Lutheran church four miles to the west and a Methodist church five miles to the northwest.

The people are an average country folk of Scotch, English, Irish and German descent.

Ten years ago this church was in serious straits. While one of the oldest churches in Illinois, it had ceased to grow. It was on the decline. The people were worshiping in an old frame structure built half a century before. It was the old type of church architecture, a one-room building, boxy, straight board seats and with scarcely any furnishings. The church and manse lots, surrounded by the remnant of an old wire fence, were veritable weed-patches. To the north of the church stood some old tumble-down sheds that made every passer-by shudder and think to himself, "Surely the Lord hath deserted this place." The manse and everything about the premises presented the same forsaken appearance, reminding one of a man who had gone off on a long journey and had forgotten to leave any one in care of his abode. The last minister had resigned with four hundred dollars owing on his salary, which amount had to be borrowed by the church. As an expedient to relieve the financial stress, one of the elders, a farmer, was engaged to preach for three hundred dollars a year. The Presbytery had granted him a temporary license and he served the church for nearly three years, or until he died.

The DuPage Township Church in its Straightened Condition Ten Years Ago

Not a person had united with the church for five years. Many of the young people had drifted away from it and older ones, also. Two out of every three of the Sunday-school teachers were members of one family. The three elders were trustees, and each taught a class in the Sunday-school. In addition to this, one of the elders was Sunday-school superintendent, Sunday-school treasurer, church treasurer and treasurer of benevolences. Little or nothing was being contributed to benevolences. About the only service the church attempted was to open the doors on Sunday for church and Sunday-school. The people had become discouraged and indifferent. One of the leading elders told me he had given up all hopes of the church ever being able to support a pastor again alone.

And all this very discouraging situation in the midst of a thrifty and prosperous community—where the public roads are paved with gravel, with free delivery of mail, splendid houses and barns, thoroughbred cattle and horses, and all the modern farm machinery in the market. It was deplorable.

This run-down condition of the church was no reflection whatever upon the church people of the community or upon those intrusted with the leadership at that time. They were good, earnest, conscientious men and women—as fine a class of people as you could meet anywhere. No one knew better than they that things were not going well with the church and none deplored more than they the sad and apparently hopeless situation. Had they not been of the right kind of stuff this church would have died years ago. But they were the true blue. None were more anxious than they that Zion should be built up and prosper. They have been ready and willing to adopt the new plans and have coöperated most heartily and are still among the most loyal and efficient workers. The condition of their church at that time was not exceptional. Other country churches were, and are, in the same plight. The fact of the matter is the country church is undergoing a transformation. These faithful people at DuPage were not responsible for the breaking-up process—it came in spite of all they could do. It had to come—as the shell on an egg has to give way when a new life is about to be born.

This same church is flourishing to-day "like a tree planted by the rivers of water." Dr. Warren H. Wilson said of it recently, "It is the most conspicuous example of successful country church work between the oceans."

In ten years the membership has more than doubled, increasing from eighty to one hundred and sixty-three. In all there have been one hundred and forty-one accessions, mostly on profession of faith.

The total amount contributed to benevolences in this period is $5,270 as against $6,407 given in the fifty years preceding.

A year ago a fine new house of worship was dedicated—costing ten thousand dollars in money and the equivalent of another thousand in hauling. The men of the community did this work gratis. The Catholics in the neighborhood and the German Lutherans and men of no denomination—all helped to haul the material, and many of these gave money besides.

All the money was subscribed before the work of building began.

The new church is built of brick with Bedford stone trimmings. The maximum seating capacity, including the lecture-room, is five hundred people. There is a Sunday-school apartment with separate class-rooms; a vestibule, cloak-rooms, pastor's study, choir-room and mothers' room. The basement has a large dining-room, kitchen fitted up with gas-stove, running water, sink, etc., and toilet and furnace room. The heat is from hot-air furnaces and the light is from gas generated by a plant installed in the basement. There is also a system of water-works.

The floors, except in the basement, are covered with heavy cork carpet. The interior is beautifully finished in oak. City people who have seen this splendid country church home have said that it would do any large city congregation justice.

The church is well organized in all of its departments and a fine spirit of harmony prevails.

The Church as It is To-day, Regarded as the Most Successful Country Church Between the Oceans

What has brought about the transformation? Some one suggests, "The prosperous times have done it." But according to Doctor Wilson's statement ten thousand country churches have disbanded and ten thousand more are soon to disband if something is not done for them. And all this under the same "prosperous times."

Another explains that it was the personality of an individual that wrought the transformation. But many country churches have failed with strong and winsome men as pastors. The Scotch elder that preceded the present pastor at DuPage was a good preacher they said—an excellent Bible student and a very delightful man—so was the minister that preceded him, and yet the church was not growing under their care. So it must be more than ready money and the personality of the minister that makes a church grow.

The pastor of the church is privileged to relate the story of how this country church made good and any country church can make good, in the columns of FARM AND FIRESIDE.

[TO BE CONTINUED]

SUNDAY READING

Eyes That See

By Rev. Charles F. Weeden

It is a great blessing to learn to see things in this beautiful world. Rushing through the country in an automobile isn't the best way to do it. To the careless onlooker

> A primrose by a river's brim
> A yellow primrose is to him
> And it is nothing more.

The patient, diligent searcher has abundant reward and to any one who scratches the surface of Mother Earth there is a wonderful revelation. Take the study of oceanography. If in some magic craft you sink thirteen hundred fathoms into the sea, you would find darkness. The sun never pierces the deep mass of waters. It is cold down there, too. The forms of life are adapted to that region of perpetual night. The fish seldom have eyes, but long tenticles for feeling—just as a blind person becomes sensitive in the touch of his fingers. Yet there is a sort of dim moonlight even in the deepest bottoms, for the phosphorescent creatures burn their lights along the dark pathways. The wonders of God are in the deep.

Suppose you are at the family breakfast table. Your little girl will ask you a question that staggers you. She has been thinking about the earth revolving day and night. "Papa, why don't we fall off the earth?" "Why—er—why—because—" then you try to mystify the little mind with big words, simply because you are mystified yourself. "Why don't we fall off? Why, because the centripetal force is greater than the centrifugal—don't you see?" The child wriggles in her chair, smiles and answers, "I don't know what you mean." And *you* don't either! What is the force of gravity? Just a miracle of God—one of his wonders.

Did you ever study the stars in family groups? God sends along a comet once in a while—lest we forget. The Creator has flung them out into space as He has our sun system and people up yonder are pointing their glasses at us and we at them, but about all we can say has been said ages go: Canst thou bring forth the seven stars in their season? No, Job. We have not yet got beyond King David and only repeat after him, "The heavens declare the glory of God's wonders."

The pages of history tell of the marvels of God. History is the carrying-out of a plan. We are like workmen in a vast factory, each doing and understanding his part in making a locomotive or a reaping machine, but not knowing how to put the whole together. The world is God's work-shop. Men are busy in it, turning out their machines or raising their corn or cotton. History is a vast survey. A flash-light upon the past is a great revealer. The great races have been reduced to three. Caucasian, Mongolian and Ethiopian. The improvement of the white race is marked as we compare periods of history at great distances from each other.

The old savage idea was to kill your neighbor and seize his property. To-day the ruin of a neighbor or lack of fellowship and friendly intercourse with him is a failure to understand our own best self-interests. The get-together spirit is in the air. It is becoming popular for nations to help and sympathize with each other. The chief executives exchange messages of condolence over an earthquake or a flood in one nation or another. The network of Christian missions is covering the earth, proving everywhere the harmonizing, uplifting power of the Gospel.

The wonderful God will bring about the unity of mankind. He is doing this as men understand the Man of Nazareth. Is Christ more than a name to you? They tell a story of a great scientist who, one fine summer day, went out in the Highlands of Scotland with his microscope to study the heather bell in all its native glory, and, in order that he might see it in its perfection, he got down on his face, without plucking the flower, adjusted his instrument and reveled in its color, its delicacy, its exquisite beauty, "lost in wonder, love and praise." Suddenly there was a shadow over him. He waited for a time, thinking it might be a passing cloud. Presently he looked up over his shoulder and there was a splendid specimen of a Highland shepherd watching him. Without saying a word, the naturalist plucked the little heather bell and handed it with the microscope to the shepherd that he too might see if he had vision. The old shepherd put the instrument to his eyes, got the heather bell in place and looked at it until the tears ran down his rugged face like bubbles on a mountain stream. Then, handing back the little flower tenderly, he said: "I wish you had never shown me that. I wish I had never seen it." "Why?" asked the scientist. "Because, mon, that rude foot has trodden on so many of them." When once we behold the wonders of God in Nature, in history and see through the life and sacrifice of His Son the great loving heart of God, we shall be sorry that we ever treated Him badly. The Lord open our eyes, that we may see the King in His beauty.

Do Things Happen for the Best?

By Orin Edson Crooker

Not infrequently in times of great trial or sorrow one seeks to explain that which one does not fully understand by saying, "Everything happens for the best." There is a certain sound to this phrase that strikes agreeably upon one's ears. It seems, moreover, to indicate a deep abiding faith and trust in God.

But is it true that everything happens for the best? We think not! Experience indicates no such infallible result, nor is there any Scriptural basis for such a philosophy of life. The New Testament tells us that "All things work together for good to them that love God," but this is a long way from saying that "Everything happens for the best," while the good ends that result, it will be seen, are limited to those whose lives are lived in close harmony with God.

It would be more correct and more in keeping with the sense of Scripture to say that out of everything that happens God will bring the best that is possible—to the believing heart. No doubt this will oftentimes be little enough. No doubt it will frequently quite match the small faith that is in our hearts. However, God will bring to us the best that is possible under the circumstances. Of this we may rest assured.

"But," you protest, "this is not nearly so comforting a thought as the other." Perhaps not, if one is content to make no attempt to help God in His efforts to bless our lives. But to any one who believes that God will reward every conscientious effort one makes, it adds new meaning to all that one does.

Some responsibility, we will say, falls to your lot. It is a great trial to you, and an added burden. Your shoulders are already carrying more than they ought to bear.

Will you sit down, fold your hands and content yourself with saying, "It's all for the best?" Will you let the burden crush you, while you murmur with your last breath, "Everything happens for the best?" By no means. You will seek to discharge the responsibility as best you may, asking God to give you strength in this time of need, trusting that out of all you do God will bring, not perhaps the very best, but the best that is possible under the circumstances.

Possibly you are ill and the doctor tells you that some disease has fastened itself upon the tissues or organs of your body. Will you sit down and resign yourself, saying, "What's the use of making any effort to stay its course? It's God's will. It's all for the best?" Certainly not. You will do the most you can to overcome the trouble, calling to your aid such means as lie within your power—trusting, all the time, that since you have done the most and the best you can that God will bring out of all your efforts the best result possible.

There are many things that do not happen for the best. It would be an ideal world if this were so. But the believing heart trusts that God will so order things that the best possible results will come from all that one does. And the trusting heart also believes that "God helps those who help themselves."

GARLAND STOVES AND RANGES
"The World's Best"

Something You Should Know

For **38 years GARLAND** Stoves and Ranges have had the greatest sale of any stoves and ranges in the world. The line comprises Stoves and Ranges, **Furnaces,** Gas Ranges and Appliances. The **GARLAND** costs you no more than stoves and ranges of inferior grade. Secure the World's Best.

Write us for Free book and choice recipes, which will be mailed to you on receipt of your request. Ask your dealer to show you

GARLAND Stoves and Ranges

BAKE WELL! COOK WELL! HEAT WELL! THEREFORE, ALL'S WELL!

Furnaces, Gas Ranges and Appliances

Sold by Leading Dealers All Over the World

The Michigan Stove Company

Detroit *Largest Makers of Stoves and Ranges in the World* **Chicago**

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Reg. U. S. Pat. Off.

Every lamp needs a Macbeth "Pearl Glass" lamp chimney because my chimneys make lamps better.

They make the flame give more light because they give the right balance of draft. They let the light shine out because my "Pearl Glass" is clear as crystal. They are tough and never break from heat.

To make sure, look for my name, "Macbeth," etched on the chimney. I make a chimney for every style burner. My Index tells which one to get. Send for it.

MACBETH,

Macbeth-Evans Glass Co. **Pittsburgh**

EMBROIDERY

taught by the most complete textbook of embroidery ever published. Practical working charts, plates in color, instructions as to use of proper designs, stitches and threads for every article, and perforated patterns furnished with each copy of the book. Every matron and maid in your neighborhood will want it. You can make money showing it to friends and acquaintances. Write today to

DEPARTMENT E

WOMAN'S HOME COMPANION

Madison Square, New York City

25 Thanksgiving Post-Cards

Without Cost

25

Beautiful Thanksgiving Post-Cards Packed in a Handsome Box

WE HAVE secured for our FARM AND FIRESIDE readers the finest set of Thanksgiving Post-Cards that we could find in the market. These cards are beautifully lithographed in fourteen colors, and in design and sentiment are especially fitted to the occasion.

There are gold-back cards, silver cards, turkeys, corn, pumpkins, in fact, every conceivable Thanksgiving sentiment. Just the thing to send your friends and relatives as tokens of remembrance during the Thanksgiving season. Every card is a work of art, and will delight you and your friends with its beauty and sentiment.

How to Get These Cards

We want every FARM AND FIRESIDE reader to have at least one set of these beautiful cards. You can get a set free, postpaid, in two ways, as follows:

OFFER No. 1—Send us $1.00 for a three-year subscription to FARM AND FIRESIDE and a copy of our great book, "Farm By-Products." We will send you **Without Cost** a set of 25 Thanksgiving Post-Cards.

OFFER No. 2—Send us $1.00 for your own subscription to FARM AND FIRESIDE and of two neighbors, and we will enter all three for one year each, and will send you a copy of "Farm By-Products," and also will send you, **Without Cost,** a set of 25 Thanksgiving Post-Cards.

Send your order at once to

Farm & Fireside, Springfield, Ohio

Farm Notes

The Corn-Roast Revived

THE staid old Cape Cod farm-house must have seen many merry times since it was built in the eighteenth century, but surely none more picturesque than this corn-roast of ours nearly two hundred years after the first fire was kindled on its spacious hearth—a revival of an ancient and joyous feast.

To recall the olden scenes the twentieth century guests have come in costume, the men in sugar-loaf hats, wide white collars, scarlet capes and knickerbockers, and the girls in demure "Priscilla" caps, snowy kerchiefs and soft blue or gray gowns, so that quickly the low-studded rooms seem to relinquish all their associations with the days of railroads, factories, steam navigation and canal building, and gladly resume the vanished life of the brave settlers of this coast.

The fireplace is like a brick tunnel mouth, blackened by ten thousand roaring blazes of the past, and almost a room in itself for hospitable capacity. For it had to serve as a common shelter for all the household against the invading cold of the long winters, when they lingered each night in its welcome heat and cheer, before mustering courage to dash upstairs to the freezing bedchambers.

At one side of its rear wall the "bean-hole" opens through the smutted bricks, where the luscious contents of the earthen pot were slowly baked to perfect "crumpiness" atop, with reefs of succulent pork protruding from the rich brown bed of beans, and so savory when the housewife drew out the smoking receptacle as to make the waiting mouths water in anticipation and children's voices shout the impatience of their keen-edged hunger.

To-day the mantel-shelf is ornamented with sea-shells and red-ripe tomatoes, placed alternately, with appropriate suggestion of the farm's nearness to the ocean, while from the edge of the shelf yellow summer squashes hang by the curved knob at the end of their crooked necks, like plucked chickens on the racks of a city market. On the wall above is fastened a pine bough weighted with a great wasps' nest like a monster cone; the winged architects have enwrapped the papery tissues so adroitly about the bark and needles of the tree as to make their dwelling seem a huge fungus or dry gray tumor of the woodland, and no more effective ornament than it makes here for the old room could be devised by human sculptor or carver. The appropriate trimming of the remainder of the room is an abundance of freshly-cut corn-stalks holding their gallant plumes erect in refusal of surrender to autumn, and trailing their long green leaves like the pennants of anchored yachts.

When the blazing logs on the hearth have yielded a bed of hot embers, the girls begin tearing the husks from the waiting ears that come from their silk-lined garments creamy white and slightly damp like new-washed baby's flesh. Then boys ready with pitchforks and sharpened sticks impale the ears on the tines or wooden points thrust into the thick ends of the cobs and hold them close to the bright embers until the plump kernels all along one flank begin to smoke appetizingly, and come away deeply tinged with brown as though a walnut-stain had been rubbed into their satiny tissues.

As soon as the ears have been turned and held to the coals again until browned all about, they are taken from the tines and sticks by the eager company, but any who have neglected to provide themselves with napkins of the husks cry aloud for their scorched fingers and briskly toss their prizes to and fro between their hands, to the glee of the more prudent guests.

And then as butter is applied to the roasted ears and, instantly melting, runs smoothly over the kernels and into every crevice between, making them gleam like some rare golden bronze, and salt is shaken over all, it is scarcely strange that the feasters can not repress little neighings of delight as they sink their teeth deep into the delicious food.

On a table in a corner of the room is set a generous crock of old-time "switchel" with its mingling flavors of ginger and molasses, served by a ruddy-cheeked Puritan maid, whose thick brown braids of hair descend becomingly over her shoulders among the kerchief's white folds, on either side of her unconfined slender neck; and to her refreshment the feasters with thirst stimulated by the salted corn often resort. But surely it is not wholly their thirsty throats, nor the virtues of the frugal switchel, that bring the lads so often to the pretty Priscilla's table; a century or two, more or less, do not seem to have dulled the attraction of merry brown eyes that look from the frame of clustered ringlets in a snugly-set Puritan cap.

Before the company disperse, and the old gray farm-house after this surprised awakening sinks back once more into its placid brooding over ancient memories, the observer is minded to sweep his glance again over the animated scene, that he may the more vividly keep the charm of its quaint features in his recollection.

In the stress of thronging duties, and under the trial of commonplace or sordid surroundings, there will be more than momentary cheer in remembering how this warm glow of the crimson embers struck up from the hearth on the simple decorations of the homely living-room, lingered affectionately on smooth cheeks and brows and the olden costumes of the guests, and glanced back requickened from the many happy eyes.

And who can tell if, from the homestead's shadowed nooks and corners, there may not even now be looking with eager pleasure on the bright picture some of the wistful vanished faces from corn-roasts at this same staunch fireplace in the brave "lang syne?"

ELIOT WHITE.

Agricultural News-Notes

The American Grocer says that "more than two billion tons of food products, including milk, are preserved in tin cans every year."

The vital topic in the macaroni-growing localities in the United States is the study of how to grow crops with the least rainfall. Prize contests would increase the interest and result in nearly as much good as the "corn tests" which are now so popular and useful.

The dealers in cut flowers in several cities in southern Texas are interested in the proposed establishment of an extensive garden for growing on an extensive scale choice cut flowers. The floral company propose to locate about fifteen miles from Galveston, on the interurban line to Houston. *

Haste and Waste

Stop and think for a moment the next time you are about to buy soda crackers.

Instead of hastily buying soda crackers that go to waste because broken, soiled or soggy, buy

Uneeda Biscuit

in separate five-cent packages. Soda crackers in large packages soon become broken, stale and unpalatable. On the other hand, Uneeda Biscuit in handy, moisture proof packages are *always* fresh, clean, crisp and whole—*not one wasted.*

(Never Sold in Bulk)

NATIONAL BISCUIT COMPANY

It's due the Family=

that the reading in the home shall be "only the best." Less than the best is unfair to every member of the family circle.

Every week's issue of The Companion for 1911 will be packed full with helpful suggestions—for girls at home, at college, or who must make their own way—for boys in their sports, hunting, fishing, etc.—for the family in making the home more comfortable and attractive.

The Larger Youth's Companion

In the next year's volume there will be 50 popular papers, 300 capital stories, splendid serial and adventure stories the year round, 2000 bits of wisdom, wit and humor. What the Larger Youth's Companion offers for 1911 is shown in the Illustrated Announcement, sent free with specimen copies on request.

All the Remaining 1910 Issues Free

HOW to Get Them

EVERY NEW SUBSCRIBER who at once cuts out and sends this slip (or mentions this publication) with $1.75 will receive

ALL THE REMAINING WEEKLY ISSUES for 1910, including the Thanksgiving and Christmas Holiday Numbers.

THE COMPANION ART CALENDAR for 1911—lithographed in 12 colors and gold.

THEN THE YOUTH'S COMPANION for the 52 weeks of 1911—reading equivalent to twenty-seven 300-page volumes of romance, adventure, science, travel, etc., costing ordinarily $1.50 each.

RTX85

THE YOUTH'S COMPANION, BOSTON, MASSACHUSETTS

NO. 3,

WESTERN EDITION

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NOV 17 1910
U. S. Department of Agriculture

FARM AND FIRESIDE

THE NATIONAL FARM PAPER

ESTABLISHED
1877

NOVEMBER 10
1910

Thanksgiving
Number

Henry F Wireman

50¢

The President Work Shirt

WASHABLE AND GUARANTEED

Do you want a shirt that is roomy—so that it won't impede your movements when you work?

That is lock-stitched throughout; that is guaranteed—rip and tear proof, that has every wearing point strongly reinforced; that has the buttons sewed on extra strong?

That costs only 50 cents?

Then you want the **President Work Shirt**—the best work shirt made—bar none.

Made in all colors, in Chambray, in Khaki and in Sateen (black).

Just read about the way we make the President Work Shirt.

SHOULDERS. Double-ply cloth, ample and roomy.
SLEEVES: Roomy; with reinforced gore where lock stitched to shirt.
SLEEVE OPENINGS: Especially stayed with heavy thread lock-stitched hundreds of times.
FRONT PIECE: Double-ply cloth, double stayed top and bottom, with double lock-stitched buttonholes.
BUTTONS. Four holes instead of only two—sewed on with extra heavy thread to stay.
BUTTONHOLES: Sewn through double thickness of cloth, heavily stitched.
THE SKIRT: With special double cloth stay and gusset double lock stitched, untearable.
FINISHED: Throughout; all seams felled. Practically no raw edges.
POCKET: With special pencil holder—solid, untearable.

All proportions are extra generous—one inch wider and one and one-half inches longer—no binding nor restrictions when a man's at work. Each **President Shirt** is washable and GUARANTEED.

Insist on the **President Shirt**, if you want the **BEST** your 50c. will buy. If your dealer can't supply it, with our Guarantee Bond in the pocket, send his name, 50c., and your size, and we will see that you are supplied. Or, if you wish samples of fabrics and fuller information **free**, just send your address on a postal.

PRESIDENT SHIRT COMPANY
12 W. Wyoming St., Baltimore, Md.

YOUNG MEN WANTED

To Learn the **Automobile BUSINESS**

BIG PAY

Work pleasant, and demand for trained men great. Fit yourself for position of chauffeur or repair man. We teach you by mail to become thoroughly efficient in 10 weeks and assist you to secure a good position. Highly endorsed—reasonable—no automobile necessary to learn. We furnish free model to every student.

Send for first lesson today—It's Free

Empire Auto Institute, 212 Empire Bldg., Rochester, N. Y.

The Original Automobile School.

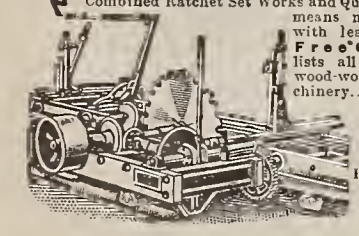
9 CORDS IN 10 HOURS

BY ONE MAN with the **FOLDING SAWING MACHINE.** It saws down trees Folds like a pocket-knife Saws any kind of timber on any kind of ground. One man can saw **more** timber with it than 2 men in any other way, and do it **easier.** Send for **FREE** illustrated catalog No. A55 **showing Low Price** and testimonials from thousands First order gets agency.

FOLDING SAWING MACHINE CO.,
158-164 E. Harrison Street, Chicago, Illinois

Make Money With An American SAW MILL

Lumber is high. A car load or two pays for an American Mill. Supply your needs and your neighbors'. No experience needed. Haul mill to timber if desired. **All Sizes—All Prices.** The Variable Friction Feed, Combined Ratchet Set Works and Quick Receder means most work with least power. **Free Catalogue** lists all kinds of wood-working machinery. Ask for it.



American Saw Mill Machinery Co.
150 Hope St.
Hackettstown, N. J.
1576 Terminal Building
New York

BROWN FENCE SAMPLE FREE

Rust Proof. Bull Strong

Fences for horses, cattle, sheep, hogs, chickens, etc. 160 styles.

BARGAIN PRICES:
14 Cents Per Rod Up.

We pay the freight. Lawn Fences and Gates. Free catalog and sample.

THE BROWN FENCE & WIRE CO.,
Dept 21W Cleveland, Ohio.

With the Editor

If you have difficulty with the hired man or with your wife or your husband or the school-teacher or the boys of your own family or the minister, the reason is, in all probability, that you fail to put yourself in the place of the ones with whom you either wage controversy or toward whom you feel edgewise.

I think it was Charles Reade who wrote a novel entitled "Put Yourself in His Place." It is the rarest of gifts, that of being able to put yourself in the other fellow's place. It takes a great man or woman to do it all the time, and that thoroughly. The man who can must know human nature. He must know how the frost stings the other man's hand when the corn stands white and hoar in the gray dawn of December, when the empty wagon goes "br-r-rump! br-r-rump! br-r-r-rump!" over the ridged rows, and the horses stand braced and shivering ready to run at the drop of the hat, and the frost makes the other fellow as wet as a rat after the sun comes out, and the hooks on the top of the "hackberry" corn-kernels tear the softened fingers, and the thawing earth gaums up the other fellow's feet until he can hardly walk, and the other fellow gets lame and sore and out of sorts. He must be able to know by some sort of clairvoyance how it seems to have a brood of little children hanging to one's skirt, and another coming, and more to do than four women can do—and dishes to wash three times a day. He must be able to realize, whether he ever taught school a day or not, how it seems to try to do more with eight grades than city teachers do with one—and for half the salary—and to wonder if the patrons of the school understand and to suspect that your whole work is a failure—because nobody feels it worth while to come around and tell you that it is a success. He must be able to understand, if he is a hired man, how the whole risk of the year's operations rests on the boss, and that only the hired man has a sure thing.

When one is able really and effectively to put himself in the other fellow's place, he has too much charity to complain unreasonably, and too much light to see the cause for quarrel. The world would be a different place, in politics, religion, wage-earning, employing, marrying and giving in marriage, rearing children, keeping school and making and reading farm and other papers and magazines, if all of us could and would put ourselves in the other fellow's place, all the time, and every day.

If it were possible for us to put ourselves really and truly in your places, we could make of Farm and Fireside a farm paper such as was never seen. We are trying to do that, more and more all the time.

In this connection, I want to refer to the letter recently received from one of our readers, Mr. A. G. Humphries, of Philippi, West Virginia. I know he will pardon me for taking his name in this rather public way. Mr. Humphries is one reader—perhaps the only one—who is able to put himself in the place of those who are making Farm and Fireside, in the one respect of our advertising policy. He begins his letter thus: "Editors Farm and Fireside, Gentlemen," and then adds: "Now that sounds nice as the beginning of a business letter, but I have a mind to begin this letter 'My Dear Friends,' because I have a bunch of roses for one thing, and some questions to ask for another. Of course, you are all strangers to me—in a way—and I rather hesitate to compliment strangers; but for this one time I am going to throw my false modesty to the four winds.

"The one thing that I feel most like complimenting Farm and Fireside for is your advertising columns. In every issue I notice carefully the ads. I see a class of advertisements that commonly appear in high-priced magazines. No such 'catch-penny' trashy ads. as we find in many publications of the day. Having been an advertising manager once, I know at least something about how hard it is to keep track of ads. and people who advertise. Again with hat in hand, and a court salaam, let us throw the biggest bouquet we can, and say 'Thank you.'"

Now maybe you think we didn't feel cheered and helped by that letter! If you think such a letter a matter of no importance, you are shockingly mistaken. It is of the utmost importance. It shows that there is one farmer who is a reader of the paper, who has had the experience which makes it possible to put himself in our place. I am printing so much of Mr. Humphries' letter—for which I have thanked him sincerely—as a help to all of you to put yourselves in our places on this matter of advertising. Won't you please try to do it?

Mr. Humphries is a farmer. He farms eighty-five of West Virginia's finest blue-grass acres—made fruitful by limestone—and the real reason of his letter was the impulse he felt to "call down" one of our contributors for what looked—from West Virginia—like exaggerated statements—but that's another story. The point here is that there is one farmer who, having been in the advertising business, knows the game and realizes how hard it is to make our list of advertisers so exclusively high class.

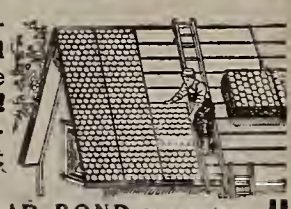
All of you can see that the subscription price of Farm and Fireside is not high enough to make that alone a source of much profit. The profit is made by making our ad ertising columns a great market-place where buyers and sellers meet and trade. Some publishers seem to think that their whole duty is to open a market-place and invite readers and advertisers to meet, and then put in effect the rule of every man for himself and the devil take the hindmost. We can't see it that way. If we were arranging this gathering under a roof, instead of through the mails, we should feel obliged to keep pickpockets, swindlers and corrupt practitioners out. Any decent institution feels the same way. The department-stores hire special policemen and detectives to protect their customers. We don't see wherein our duty is any less. So we keep the pickpockets, swindlers and corrupt practitioners out of our advertising columns. We do this for our own sakes. Men who respect themselves could do no less. There are plently of shady deals in which men are at liberty to engage, out of which money can be made. People stay out of them in the main, because, in the main, people are too fond of their self-respect to become either crooks, or the accomplices of crooks. But, though we should pursue no different policy if there were no way in which we could ever get credit for it, we like to have the credit, just the same. We like to see evidences that our readers appreciate our policy of cleanness and honesty—a policy which we adopt for our own sakes, just as you adopt the policy of packing your products honestly.

Every man has one fellow with whom he is thrown into contact pretty constantly—and that is himself. So every one who is wise keeps on good terms with that fellow.

But, as a by-product—we are strong on by-products—of being decent, the respect of others is valuable. You can help us realize on this by-product by telling all these responsible advertisers "I saw your advertisement in Farm and Fireside." Really, don't you owe it to us to do this? We leave it all to you.

Herbert Quick

A "REO" Steel Shingle Roof Is FIRE INSURANCE!



Edwards' famous "Reo" Steel Shingles are **FIRE-PROOF!** Reduce fire insurance cost **ONE-FIFTH!**

$10,000 IRONCLAD BOND guarantees your roof lightning-proof when built of material that is the Nation's roofing sensation—the famous

Edwards "REO" Steel Shingles

"Reo" Shingles actually outlast buildings themselves! The "Reo" roof you put on this season will **last longer than your buildings!** Outwears **four** wood shingle roofs; outwears **six** composition roofs. Cost **half the price of best wood shingles,** for you get them of us at

Manufacturer's Factory-to-Farm Prices!

All freight prepaid at factory prices. Quick service. The day you get your roof you can lay it—a hammer and a few nails; the rest is easy! **Send for new, free Standard Roofing Book No. 1148; a postal will bring it.** Full, complete particulars about the wonders of famous "REO" Shingles. Send the postal **today,** or write us a letter—the book will reach you by return mail. Address (29)

THE EDWARDS MANUFACTURING CO.
1108-1148 **Lock Street, Cincinnati, Ohio**
World's Largest Manufacturers of Iron and Steel Roofing

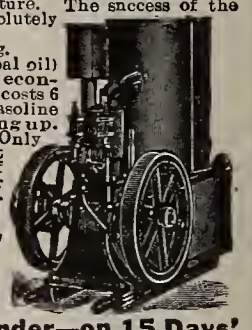
Its Economy and Power Startle the World!

The Engine Runs on COAL OIL at a Fraction of Cost of Gasoline.

Thousands of these marvelous engines—in actual use today—prove beyond question that kerosene is the engine fuel of the future. The success of the "Detroit" Engine is absolutely unparalleled.

Demand is overwhelming.

Kerosene (common coal oil) runs it with wonderful economy. Kerosene generally costs 6 to 15c less per gallon than gasoline—and gasoline is still going up. Runs on any engine fuel. Only three moving parts. Light and portable. Does work of engines weighing four times as much. Runs everything.



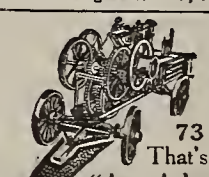
The Amazing "DETROIT"

The Kerosene Wonder—on 15 Days' Trial—Direct From Factory

Any engine you want, from 2 to 20 H. P., sent on 15 days' free trial—**tested immediately before shipping and ready to run.** If dissatisfied—**every dollar you have paid us for the engine cheerfully refunded.** Prices lowest ever known for high-grade, guaranteed engines.

The New Book is Ready.—WRITE! Tells all about these new wonders that mark a new era in engines. Special introductory price on first "Detroit" engine sold in each community. Quick action gets it. Address

Detroit Engine Works, 133 Bellevue Ave., Detroit, Mich.



Ann Arbor
"THE BALER FOR BUSINESS"

Baled
73 tons in 10 hrs.
That's a great record; but the "Ann Arbor" is a great press. Does most work—does it easier—is faster, safer and costs least to run. $3.26 was average repair cost for 1909. Let us submit positive **proof** of superiority.

Send for Free Baler's Book

Gives more practical hay press information in one minute than you get from any other book in a day. Also get our *free souvenir pin.* Address Box 408.

Ann Arbor Machine Co.
Ann Arbor, Mich.

Murray **New 1911 Model Buggy**

Here is a genuine opportunity for quick buyers. To get full details write today for our special new 1911 circular.

Murray pays the freight until December 31st.

Gives four weeks road trial, insures safe delivery, gives two years' guarantee, arranges construction to suit you.

Write today for Circular

THE WILBER H. MURRAY MFG. CO., 322-328 E. 5th St., Cincinnati, O.

THE PROOF OF THE HAY PRESS

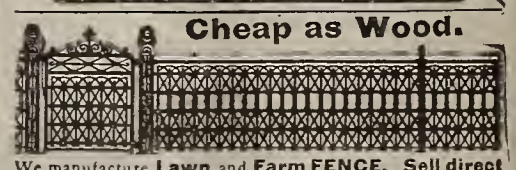
Is its Capacity—Earning Power.

SPENCER HAY PRESS Catalogues make great and definite claims proven by the press in action **or no sale.** Nature of contract protects you. Covers every claim **by actual figures.** More tons per hour guaranteed than by any other horse press, same size bale. Send for **new Catalogue D.**

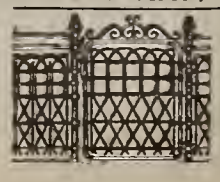
Write Right NOW

J. A. SPENCER
Dwight, Illinois

Cheap as Wood.



We manufacture **Lawn** and **Farm FENCE. Sell direct** shipping to users only, at **manufacturers' prices.** No agents. **Our catalog is Free. Write for it to-day.**
UP-TO-DATE MFG. CO., 971 10th St., Terre Haute, Ind.



ORNAMENTAL FENCE
25 DESIGNS, ALL STEEL
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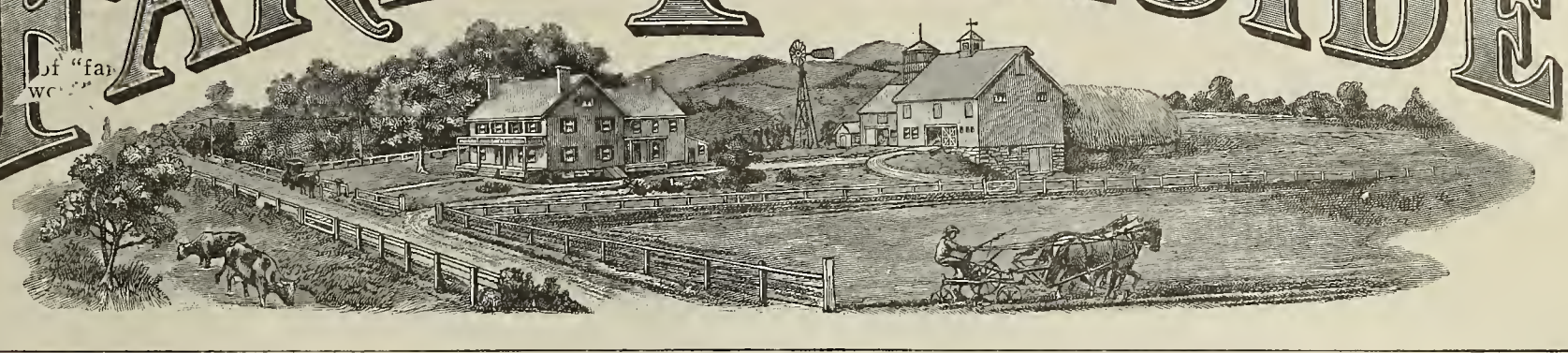
ESTABLISHED 1877
The Illustrated Farm and Family Journal

24 NUMBERS
50 CENTS

FARM AND FIRESIDE



Vol. XXXIV. No. 3 Springfield, Ohio, November 10, 1910 PUBLISHED SEMI-MONTHLY

BETTER PRICES FOR FARMERS

How to Market

FARM AND FIRESIDE is going to show its readers how to get higher prices for their staple products. The problem of marketing farm products to best advantage, hitherto has received no attention from the agricultural papers, although of vital importance to every farmer. In every other industry this problem of selling to the best advantage is considered of great importance, and experts are employed who devote their whole time and attention to the study of the rise and fall of the markets, who analyze conditions and determine weeks in advance what the price of a given article will be.

Expert Advice

Every issue of FARM AND FIRESIDE in the future will contain important information as to how to get higher prices for your staple products. We have secured Prof. H. C. Taylor, America's highest authority on the Rise and Fall of Prices, who will write on "When and How to Sell Your Produce at the Top Market Price." FARM AND FIRESIDE will attack the problem of selling staple products, markets and how they vary, and why, marketing customs, marketing for fancy trade, coöperative buying and selling, in fine, fill the capacity of sales manager to every farmer and give pointers and suggestions that will keep the farmers in the closest possible relation with the market of every staple product.

If you have hogs or wheat to sell, or are in doubt as to the best time and place to market your corn, hay, barley and other grain, live-stock or dairy products, read how to get better prices for them in FARM AND FIRESIDE. You will get the expert advice of men who are thoroughly informed regarding the market situation; who know from a close study of marketing farm produce, backed by years of experience of investigation, just when the top price in any farm product may be expected, and in addition, the influence which the season, cost of feeding and similar conditions have in the net profit of a transaction—in other words, what the clear gain will be, taking everything into consideration that must always be kept in mind by the practical farmer.

Top Prices for Our Readers

Here are some of the articles on marketing soon to appear in FARM AND FIRESIDE: "How One Man Beat the Hog Market," "When to Sell Wheat," "Forcing Milk Buyers to the Limit." It is impossible to estimate the great value of this new feature of FARM AND FIRESIDE. Remember, the advice of our experts is absolutely free to every subscriber to FARM AND FIRESIDE.

FARM AND FIRESIDE has discovered that farmers make no use of dozens of valuable by-products which exist on their farms, and which could be turned into money. Our new book, "Farm By-Products," tells about this wonderful discovery and tells how to market 267 different by-products.

"Farm By-Products"

FARM AND FIRESIDE has recently completed a remarkable book, entitled "Farm By-Products," which should be read at once by every FARM AND FIRESIDE family. It tells how every farm family can make more money right away by selling dozens of by-products which are now wasted. To make this valuable book cost FARM AND FIRESIDE thousands of dollars.

We want every reader of FARM AND FIRESIDE to have a copy of this one-hundred-page book.

Early last spring FARM AND FIRESIDE'S editor, Herbert Quick, made a tour of inspection of some farms. Editor Quick found that most of the farms were well cultivated, well stocked and prosperous. But not one of these farmers was utilizing one tenth of the valuable by-products which he found on every farm in large quantities. Every farmer, of course, knows what by-products are. Manure is a by-product. So is straw. So is skim-milk. These are not wasted, because the farmer uses them himself. On every farm Editor Quick visited, however, he found many valuable by-products that rot and waste each year—things of no use to the farmer, but which millions of people in the cities stand waiting to pay for with cash.

Turning Waste Into Profit

Editor Quick was convinced that millions upon millions of dollars are annually lost by American farmers simply because they have not yet learned the lesson so long ago learned by factories: Avoid waste—turn every ounce of material into cash. In other words, utilize the by-products.

To get at the exact facts, Editor Quick arranged with forty-one different men, in all parts of the country, to find out all that they could about the various salable things that are going to waste on farms. These forty-one men were all practical farmers or prominent FARM AND FIRESIDE contributors.

FARM AND FIRESIDE'S investigation proved that these overlooked farm by-products are not only numerous, but they are present on every farm in such wide varieties as to demand the attention of every man, woman, boy and girl who lives on a farm and is on the lookout for new opportunities.

Editor Quick gathered together the results of all this investigation in the book, "Farm By-Products," which FARM AND FIRESIDE has just published and which every subscriber can obtain without cost.

By-Products on Every Farm

"Farm By-Products" describes fully 267 valuable by-products that FARM AND FIRESIDE'S experts found are being wasted by most farm families. It tells where to find each and every by-product, how to prepare it for market, just where and how to sell it—moreover, it tells what the average price for the by-product is at the present time. Here is a truly amazing book, every page containing new wonders of hidden treasures that exist right in your farm and that can be turned into money. The book is practical from cover to cover. Every by-product contained in the book has been utilized. Every description is from practical experience.

$250 in Prizes

On November 1, 1911, FARM AND FIRESIDE will distribute $250 in prizes to the ten subscribers who have made the most successful use of "Farm By-Products." as follows:

First prize	$100
Second prize	50
Third prize	25
Fourth prize	15

Six additional prizes of $10 each.

Full details of the offer will be given later in FARM AND FIRESIDE.

Every FARM AND FIRESIDE reader has a chance to win one of these prizes, and while doing so to increase his farm profits.

Free Inquiry Service for Subscribers

Every one accepting one of our liberal offers and obtaining a copy of this practical and valuable book will be privileged to avail himself of the service of our Information Bureau. Additional information about any farm by-product mentioned in this book will be cheerfully and promptly supplied, at no other cost than a two-cent stamp for reply. It is manifestly impossible to go into complete details in every single instance about all of the two hundred and sixty-seven by-products. But we will undertake, on request, to supply any reader with further details about any special by-product in which he may be interested and give information and essential facts that will enable him to at once reach a market. If you need any pointers beyond those given in this exceptionally complete book, write us.

Names of individual or local customers can not be supplied; but the addresses of commission merchants, wholesale grocerymen of the principal cities and other large dealers in farm by-products will be gladly furnished.

HOW TO GET

"Farm By-Products"

Offer No. 1

Send $1.00 for one three-year subscription to FARM AND FIRESIDE. You will receive "Farm By-Products," postage prepaid.

We will present you, in addition, with 25 handsome Thanksgiving Post-Cards if you will order promptly.

Offer No. 2

Send $1.00 for a club of three different yearly subscriptions to FARM AND FIRESIDE. You will receive our new book, "Farm By-Products," free, postage prepaid.

We will present you, in addition, with 25 handsome Thanksgiving Post-Cards if you will order promptly.

Offer No. 3

Send 50cts. for a one-year subscription to FARM AND FIRESIDE. You will receive our new book, "Farm By-Products," free, postage prepaid.

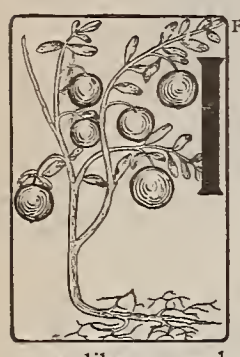
If your subscription to FARM AND FIRESIDE has not expired, your new subscription will begin with the month after your present subscription does expire.

Good for Twenty Days Only

FARM AND FIRESIDE, SPRINGFIELD, OHIO

The Cranberry

A Thanksgiving Cogitation—By Eliot White



If those who bring order where there was confusion, and extend the bounds of civilization a stage deeper into the wilderness, deserve praise of their fellows, then surely the cultivators of the cranberry should not be the last to receive honor.

Stout courage indeed it must require to attack the savage tangle of bleaching stumps, knotted scrub growth and tough rootlets that make such available swampy tracts as those of Cape Cod, for example, more like some bristling hedges of defense that an army had thrown about its position. With feet sinking into the dark, squelching jelly of miry soil beneath, with flesh pitilessly assailed by swarms of famished mosquitoes and with sweat running from their every pore in the humid air, the determined invaders of the bog must press forward wielding their mattocks like battle-axes.

With the layers of meshed growth removed, the tenacious prongs of the stumps are laid bare, defying removal from their chosen soil like huge gray cuttlefish clinging with stubborn tentacles to an ocean reef or the hull of a sunken ship. Yet the Hercules labor of purging the swamp must not falter even at these obstacles that must be "grubbed up" from the sucking mire as though they were broken molar teeth dragged from a protesting giant's jaw.

Drainage of the denuded tract must follow, involving the construction of dams and the digging of ditches to catch the ooze of the banks, for my lady Cranberry-Vine is a fastidious mistress and demands a dry, firm roothold for her vigorous growth, as imperatively as at a later season she requires for her half aquatic temperament the full flooding of her dainty bushes.

Level as a ball-room floor are the purged acres then laid and spread a few inches deep with glistening sand from the neighboring ocean—the gritty flour that its waves like unresting mill-wheels have ground through uncounted ages, and the winds have piled in the grass-topped, white-hipped dunes. Such is the preparation of the cranberry's garden-plots, that travelers flying past in the trains might take to be artificial inland beaches awaiting the caress of some audaciously high tide. And so exact in sharp-edged construction are the smooth beds that the longer ones suggest well-laid bowling-alleys, with the ditches alongside to represent the troughs in which the balls are returned by the pin-boys to the players.

Cuttings of the vine, doubled together and thrust through the sandy surface to the fertile soil below, with the help of wooden paddles, quickly root themselves and thrive like children on cream-drenched oatmeal. And by the end of the first summer, when each cutting has put forth ray-like "feelers," their far-stretching, regular rows along the clean sand seem like files of stars in a white firmament or the footprints of great birds marching in regimental order over plains of grayish snows.

By the third year the vines have covered their bed deep with hardy stems and long, trailing, wire-tough branches, bearing pink flowers among the little evergreen leaves—like a loosely-woven, but thick-napped, carpet flung superbly across the land that so lately was the forbidding waste of sterile marsh. And as summer merges into autumn the flowerets that dotted the great rug give place to the more splendid adornment of the ripening berries, the fruit of so much toil and patience, glowing at last amid the intricate tangle of stems and leafery like flawless rubies on an Indian prince's robe of state.

Ah, the richness of scarlet and crimson hues that mantle on the glossy cheeks of the healthy little apples! All the friendliness and vigor of the summer sunshine, all the deposits of fertility in the warm moist loam under the sand-layer, seem to have met with rivalry of blessing in the berries' rounded, full-blooded bodies, until they thus glow like the flesh of children heated with play in keen winter air, when the crystals of tossed snow are caught in the curls over their sparkling eyes or melt on the fervor of their ruddy cheeks.

No sooner does the word go forth that the berries are ripe than the clans of pickers, old and young, begin to assemble by railroad trains and wagons to share the work of harvesting and the merriment that enlivens the rest-hours. The field is marked off into parallel lanes with strings, like the "sprinters'" running-course at athletic games, with two pickers allotted to each. And then as the long array of kneeling figures begin thrusting their wooden gathering-scoops, edged with rake-like teeth, ahead of them through the bushy tangle to detach the berries nestling within, one could fancy them a company of grooms on the back of some giant horse, vigorously dressing his matted coat with curry-combs.

After the pails and baskets at the pickers' knees are filled from the scoops, these are emptied into barrels that are carried over the fields by two men each, suspended from staves between them the huge bunches of grapes that the Israelites brought back from Canaan. At last the welcome noon-hour yields relief to cramped knees and aching backs, and after the harvesters' whetted hunger is satisfied, a fiddle, harmonica or accordion may furnish the music for a clog-dance or rollicking "Virginia reel."

Even when the picking is completed and the stripped bushes are left basking in the autumn sunshine the possibilities of enjoyment from the bogs are not exhausted, for they must soon be flooded to keep the vines from freezing and supply their veritably amphibious craving for such drenching as would drown other growths, and then to the winter's ice-levels thus prepared will come the skaters, with the flash of blades in the brilliant sunlight and the tinkle of laughter on the crisp air, where the youngest will be in no danger from a break into the shallow pool.

And now, oh, white-staved new barrels, and you narrow boxes stamped on the end with accurate likeness of the fruit-bearing vine, that I see in the markets of the noisy city, guard well your precious store of little scarlet globes! And you, envious weevils, forbear your bud-eating, and you, crambid moth larvæ, cease your leaf-crumpling of the brave plant that furnishes human appetites so much rarer delight than you can derive from its destruction! For is it not known to you all that a whole land already feels its mouth watering in anticipation of the feasts that the ruddy berries will garnish with their luscious jelly and sauce?

For acid and "puckery" though the raw fruit tastes, what magical transformation is wrought in its flavor by the sugar's syrupy caress in the cooking! The ideal of tartness, blended, though not confused, with the ultimate refinement of sweetness, will the perfect product supply to the holiday banquet, in such wise that the feasters will feel some special utterance of thanksgiving to be needed for its toothsome virtue. And what splendor of color will the jelly introduce where its firm crimson masses stand like islands of translucent garnet between the smoking shores of sliced turkey and stuffing, tawny squash, pearl-fleshed onions and creamy potato, and above the savory uniting tide of gravy!

Then may the sharers of such bounty gratefully remember the nameless toilers who, clearing the savage bogs and preparing them for the sand-quilted cuttings, made possible the winning of the cranberry's ruby fruit from Nature's hand, that so often open and free, must have seemed to them gnarled and tenacious as a miser's clenched upon a bag of jewels.

A Thousand Demonstration Farms

How New Mexico Beat Jim Hill to a Good Idea—By L. L. Klinefelter

James J. Hill is an example of a man in whose making the item of foolishness was wholly omitted. "Jim" Hill, as they call him in the Northwest, wouldn't know a joke if he met it on a foot-bridge at noonday.

Moreover, Jim Hill is the greatest developer of railroad tonnage that the world has yet produced.

In a magazine article, last winter, Jim Hill said that if he had his way about it the country would build one less battleship and use the money to establish a thousand demonstration farms.

What made Jim Hill say that? Business, simply business. Battle-ships do not produce freight for the Hill roads. Farms do. Simple, isn't it?

But no matter what Jim Hill's motive may have been, the outstanding fact is that Jim Hill is in favor of demonstration farms. When a man, whose mind deals with business propositions as accurately and as relentlessly as an adding-machine deals with a column of figures, goes out of his way to say that he believes in demonstration farms by the thousand, it is time for the plain people who never thought of such a thing and don't know what Jim Hill is talking about to sit up and observe.

And the chances are that ninety-nine men out of ninety-nine will jump to the conclusion that he was talking about experiment farms.

Now there is just one hundred per cent. of error in that conclusion.

A demonstration farm is an experiment farm—with the experiment left out.

Quite a difference, but a vital one.

Battleships come higher and higher all the time, and, it will not be long until a firstclass article will cost ten million dollars.

Let us see, a million is a thousand thousands. Ten million would be ten thousand thousands Split up into a thousand demonstration farms that would mean ten thousand dollars for each. Right, isn't it? And, by the way, that is exactly what the territorial legislature of New Mexico appropriated two years ago for a demonstration farm—the first of its kind in the world.

If Jim Hill had his way, the New Mexico demonstration farm would be one of a thousand. instead of the only one.

Well, what is a demonstration farm and how did New Mexico happen to get into the game a year before Jim Hill did?

It came about this way. Within the past five years something like fifty thousand people have settled on homesteads in the territory, mostly in the eastern third, which is open prairie, the other two thirds being mountainous.

As this eastern third is exactly the size of the state of Ohio, there is a vast amount of land in it that can be farmed, and if it is farmed the right way, can be made to produce any crop suited to the temperate zone.

But the right way for New Mexico, with its elevation of from three thousand to five thousand feet above sea level and its rainfall ranging from ten to twenty inches, is not the way these fifty thousand new-comers have been accustomed to. They soon learned this, to their sorrow. To tell the truth, very few of these new-comers were farmers, anyway. They were school-teachers, preachers, bookkeepers and other town and city people, but few actual farmers.

Possibly this is why they were anxious to be shown. At all events they found themselves face to face with a problem. Then they got together in farmers' institutes and talked the situation over. They said, "We want to learn, we want to know what is best suited to our conditions, what crops we ought to grow and how we ought to grow them."

But nobody had the answer.

Not, at least, in such a shape as to do these farmers any good.

True, they read and studied the bulletins of the experiment stations, but they got little real satisfaction from them.

Then they said, "Why not let the territory establish farms and grow on them the crops which these bulletins say are suited to our soil and climate, and grow them for the same purpose that we must grow them—namely, for profit. We don't want any experiments, they are too expensive. Besides, let the experiment stations attend to that end of it. What we want is a practical object lesson from which we can learn how to grow crops here in New Mexico at a profit."

So they got after the legislature that winter, and as a result the wheels were set in motion and work has begun on a farm near Tucumcari, Quay County, in the heart of the non-irrigable section on which only such crops as are past the experimental stage, and by experience known to be adapted to this region will be grown under as nearly actual farm conditions as possible.

In a petition addressed to the legislature of New Mexico by the Obar Farmers' Institute, urging the matter of demonstration farms, the following reasons are submitted:

First: "Seeing is believing." If a farmer can go to a farm in his own locality and see good crops grown under the same conditions of soil and climate as his own, it will have more effect than tons of talk.

Second: Such farms would become valuable sources of supply.

Third: At slight cost the methods used, etc., could be published in bulletins or the local press.

Fourth: As the experimental feature would be eliminated and no crop grown except with a view to profit, a demonstration farm would be largely self-supporting.

Fifth: The demonstration farm would in no way interfere with the agricultural college or the experiment station, but would supplement both in a distinct field of its own. In fact, it is the natural and logical supplement of the experiment station, since it affords the vehicle for the dissemination of ascertained knowledge.

The function of the experiment station is to "prove all things," while that of the demonstration farm is to "hold fast to that which is good."

It will be seen that Jim Hill's business instinct enables him to put his finger on the sore spot of agriculture as located by those Obar farmers.

It goes without saying, that what makes tonnage for a railroad also makes money for the farmer, and that up to the present the interest of the farmer and the railroad are identical, and it is fortunate for the farmers that in this new departure in the teaching of agriculture, they have so powerful an ally as the foremost practical railroader in the world.

New Mexico, having no sea-coast, is ready to strike hands with Jim Hill on the battleship proposition and would be glad to see him have his way about demonstration farms.

Unlike most educational propositions, the demonstration-farm proposition is founded on the essential principle of pecuniary profit. In order to be a good demonstration it must make money. If it is found that it can be made to pay its way while filling its mission, when there is no limit to the number of those farms that can be maintained and viewed in this light, the new departure inaugurated by the territory of New Mexico may point the way to realizing the dream of James J. Hill of a thousand demonstration farms—even though we build no less battle-ships.

* * *

To be obliged to make a poor farm pay is good training; for when you get a better one, you know the trick.

A pessimist will not believe an ear of corn on the stalk to be anything but a nubbin until it comes out of its shuck and proves itself.

The wood-lot offers a place where the farmer may turn wintry days into profit, cutting wood, having lumber and posts sawed, and clearing up land now worthless.

The Farmer as a Business Man

Why Coöperation is Necessary and How it Works—By John Lee Coulter

THE age of speaking of "farmers *and* business men" has past. If we would speak correctly we must now say "farmers and *other* business men." To be sure, some farmers are fearfully inefficient business men and many may still be said to have no business sense; but, generally speaking, the new name must be adopted. Farming is no longer a self-sufficing industry. Farmers produce more for the market than for themselves. We have gradually drifted into this new field and must face the problems.

Like the manufacturer, the farmer must either own or rent a "plant" or farm. He must buy or otherwise secure equipment to run it. He must do all of the labor, as did the early manufacturer, or hire some or all of this help, as does the modern manufacturer. Here the first serious problems of farming arise, as indeed is the case in manufacturing. All manufacturers in a given district or a given line of business organize to study the money question and the labor problem—to decide what wages they can afford to pay, to establish labor bureaus, etc. Farmers—at least those who are inefficient business men—wait until the last minute. They wait until they need money or need labor and then just hope that money will be waiting at the bank and that men (good, bad or indifferent) will "turn up."

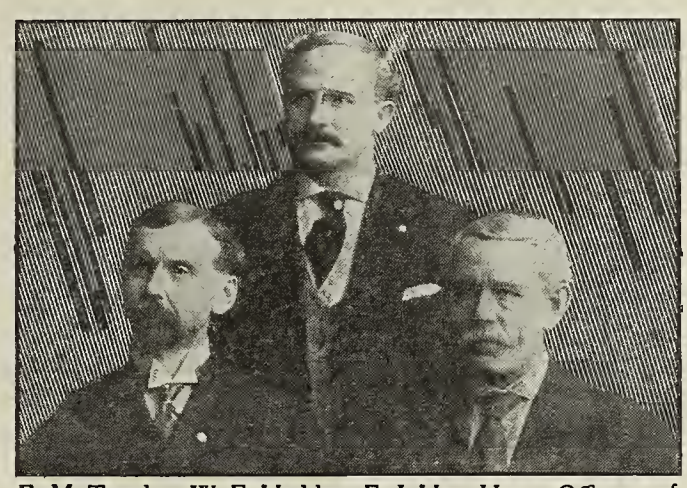
These are comparatively new problems. The farmers who are "manufacturing" meat and dairy products, cereals, fruits, vegetables and materials for clothing must compete for money and labor with these other business men who have their factories in the cities. Farmers must get their systems of securing credit or money and labor better organized. All in a district must get together from time to time. On the labor question they must determine just about how many men they wish to employ, what character of men is best, what advantages they can offer, etc. Then they should either establish a local employment bureau in touch with the press or see that there is a state employment bureau with the necessary branches. They must not only see that one is established, but they must patronize it. More uniform wages, better labor, at the time that it is most wanted, and a better farm labor system would come from such steps as these. This is a step in coöperation.

Coöperation in financing the purchase of land, securing equipment, operating the farm and moving the crops is essential. This may take the form of better coöperation between farmers and present-day financial institutions or the formation of coöperative credit associations, such as are operated successfully in many European countries.

Between 1870 and 1895 many attempts were made by the Grange, the Farmers' Alliance and other similar organizations to establish stores or buying agencies. Most of these did not survive. There was too much politics and too much sentiment and too little cool deliberation and study of business possibilities. A brief survey of this kind would not be complete if it did not make mention of the fact that during the last fifteen years this store movement has revived and been gradually growing and that it has at last gotten established on a sound and sane business basis. There are now great numbers of substantial organizations buying seeds, fertilizers, machinery, feed, etc., and other hundreds of stores on a perfectly successful basis in Kansas, Iowa, Minnesota, the Dakotas, Wisconsin, California and elsewhere. These people publish at least two papers and many reports. A letter to E. M. Tousley of Minneapolis, who is secretary of one line of farmers' stores which does millions of dollars' worth of business, would bring literature.

The manufacturer not only must buy the raw materials and make up the finished goods for the market, but he must market them all. And so, too, the farmer (now that he is producing for the market) must market most of his wares. Production and buying supplies is only a part of his labors. What boots it if he have a thousand car-loads of corn if he has to use the corn for fuel, as did many farmers who read this not many years ago; or if he have car-loads of fruit, if he has to stand by and see it decay, as did many Georgia farmers with peaches this year, or if he have thousands of car-loads of potatoes, if he has to haul them to the hillside dump, as did many north central states farmers recently. The same problem must be faced by all farmers at some time. Let me repeat, the production of the crop is only the beginning of the new "manufacturer's" work. In order to secure the best results he must study (1) the markets and (2) the methods of marketing; he must study (3) the consumers and find out what they demand; (4) he must decide what classes and grades they will use; (5) he must compare the various markets and be ready to sell in the one where demand is greatest; (6) he must understand the movement of prices (being in a competitive industry) and (7) he must watch this movement and sell at the most advantageous time. In order to do these things to the best advantage he must study transportation rates, storage problems and the present commission business.

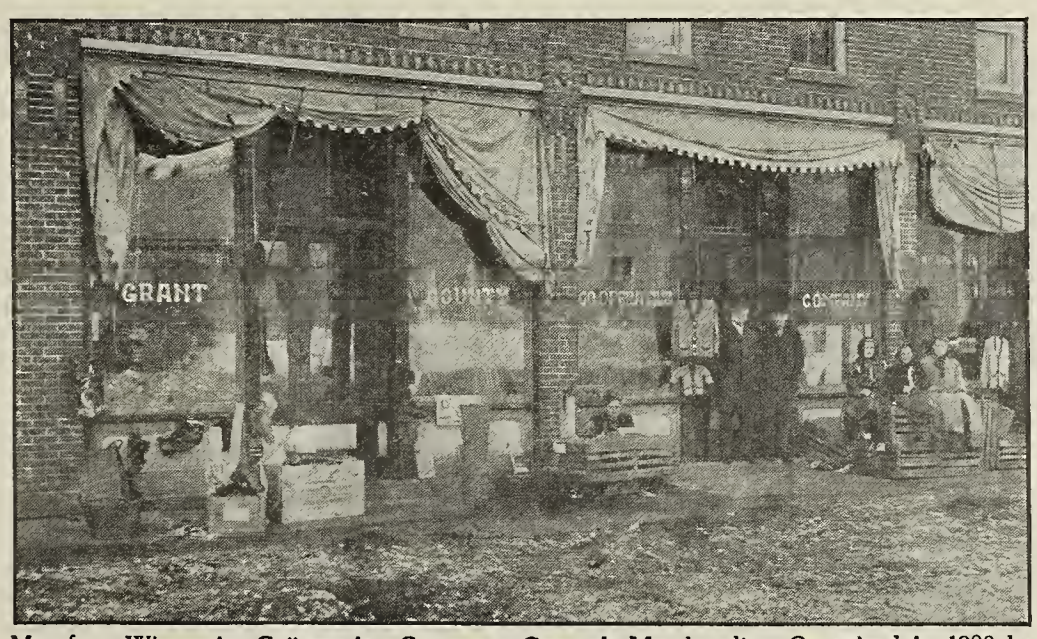
Individual marketing has proven in some fields to be wasteful and very expensive. A new method must be adopted. What shall it be? Socialists say: "Let the government do it." They would have the local, state or national government buy or build and operate railroads to carry the goods, build and own elevators, warehouses and cold-storage plants to hold the goods until they were wanted, and build and own factories to grind the grain, pack the meats, can the fruit and vegetables, make cloth, etc. None of this will be necessary if, instead of the failures of present individualism, we introduce industrial democracy or coöperation in certain lines of business where it is clear that this form would be successful, and not attempt to introduce it where it is not necessary.



E. M. Tousley, W. F. Vedder, E. J. Van Horn, Officers of the Right Relationship League, the Organizing Body of the Coöperative Store Movement in the Northwest

Our present system of private ownership of land is good in its fundamentals, and neither coöperation, communism or state ownership (Socialism) could equal it in advantages. The same is true concerning the ownership of the country home; it is largely true, too, of farm equipment. But when it comes to getting the goods which have been produced to market, it is necessary to have some organization and collective ownership of elevators, warehouses, etc. In the words of Theodore Roosevelt—an old idea, newly spoken—"Farmers should learn how to combine effectively, as has been done in industry. I heartily believe in farmers' organizations and we should all welcome every step taken toward an increasing coöperation among farmers. The importance of such movements can not be overestimated, and through such intelligent joint action it will be possible to improve the market just as much as the farm."

"Each farmer for himself and the devil take the hindmost" is the spirit of individualism, and each farmer delights in the old song "Paddle your own canoe." But a canoe in the ocean is helpless, and if you are to successfully travel on a stormy sea, you must organize. It is the same reason as we have for "rafting logs" instead of starting them across the lake one at a time.



Montfort, Wisconsin, Coöperative Company, General Merchandise. Organized in 1908 by the Right Relationship League—Thirty-Eight Members and Doing Well

Some farmers are engaged entirely in the production of things which are immediately sent to the consumers in the cities or in other parts of the country, as fruit, vegetables, etc. Some of them are interested in the producing of articles which must be worked up into a new form before they can be used by any person, as cotton, tobacco, wheat, etc. Some are interested in the production of things which spoil at once if they are not either carried to the people who are to use them or put into a new form, as eggs, meats, etc. All of these different groups of farmers have different problems to consider and work out.

A Message for Fruit-Growers and Truckers

Let us first of all consider the situation of the farmers who produce things which must be used at once, or at least very early, or be preserved at great expense (perishable products). This class is composed of the fruit and vegetable producers and the dairymen. Fruit and vegetable growers have three markets to keep in mind. In order to keep these three markets properly supplied and prevent waste as much as possible, and at the same time get a fair price for themselves and as nearly as possible a uniform price for the consumers at all points and throughout the year, they must have an organization. These three markets are (1) the local town or city market, (2) the distant market where these things are not produced or are produced at a different season and (3) the market for the same goods out of season (at times of the year when no such articles are being produced—or if they are being produced, it is at such distance that they can not be profitably transported, are too expensive for common use or are produced in hothouses at too great expense for the average consumer).

First of all, the local market should be completely supplied at reasonable prices during the season when the articles are being produced. But this same local market should not be allowed to be overstocked at any time. At the present time, without any organization, it is often overstocked. This is bad for both the consumer and the producer. The producer (the farmer) gets too low a price; much of the result of his year's hard work is lost because of decaying product; disease is apt to follow the presence of the decayed goods, and the community is at great expense in disposing of the decayed product—hauling it away to dumps, destroying it in incinerators, etc. At the same time it is bad for the consumer for two principal reasons: The consumer becomes careless in times of plenty when there is too great a supply; much good product is thrown out to the garbage-pile and great waste results at the same time that the people are learning very wasteful habits. Civilization should not be measured by the largeness of the pile of waste. As a result of this waste there are people in other districts who are in great want of the very things which are being wasted.

If there is any surplus over the needs of the community at the time it is produced, it is very desirable that the local organization get into touch at once with the nearest shipping-points where it is possible that others have not a sufficient supply. This means an organization and a competent secretary at each point. It means also the elimination of probably two thirds of the present group of middlemen who deal in these products. These different districts should be in constant touch in order that the supply may be kept nearly constant and the price nearly the same. It is better for both the farmers and the great mass of consumers to have the prices nearly constant. In order to carry out the policy of equalizing the supply and in a large measure the prices, it will be necessary to have a much better organization than is generally found at the present time. A local market-place and officer should be provided to help take care of the local problem.

The supply often varies from day to day, and the products spoil so quickly that a local storage system is necessary. The farmer who hauls his "stuff" to town can not afford to stand around all day wasting his time and the time of his horses and losing his temper. He can not afford to haul the same "stuff" back home. He can not afford to let it spoil—and neither can the people who want it. And he can not afford to let it go at the prices which often prevail. A local storage system must come. And the individual farmer can not afford to ship his stuff off to the next town to some commissionman. He has to pay too much transportation. The goods are not as good when they reach that point and often do not net him any more than his local market; while the consumers have to pay the freight and get a poorer article to eat. The only proper thing to do is to have local storage to keep things fresh for several days at a time, and only to ship to the other markets when there is enough to send so that better railroad rates can be secured and better service—such as refrigerator cars, etc.—can be demanded. This will not only get the goods to the people who want them at a cheaper price, but in better condition, and there will not be any loss by decay, etc.

But then there arises the situation where there is too much for the local market and there are not any better markets within shipping distance. What then? Then it is time to consider the best system of preserving for the "out-of-season" trade what surplus you have. In the case of fruit, there is the dried-fruit industry and the wine, the raisins, the vinegar and cider, the canned fruit and the preserves. Then there is the starch from potatoes, as well as the dried potatoes, and the canning and drying of vegetables. None of the good material should be allowed to spoil. If there is too much for the local market and no other good market within reach, and at the same time there is not enough to make a local factory a paying possibility, there is a double need for the farmers to coöperate. Now they must get together and decide whether to cut down their supply of the particular article which they have had in surplus and (if they decide to do so) what other article to grow in its place; or, whether it would not be better to put a still greater acreage to the very crop of which they have had too much and put in the necessary factory.

Here it will be necessary to have a very efficient local officer to look into the market prices of the canned goods or other prepared articles. The agricultural colleges must soon give more attention to this question and place the best information at the disposal of the farmers. Too often the farmers are led to believe, by the representative of the company which has the machines for sale or by some one who wishes to build the plant, that a factory would succeed. Here, too, is a good field for the secretary of the local commercial clubs of the towns and cities. If they are to be useful to the whole community, they will see to it that the farmers are not led into any such mistake by any resident or non-resident dealer in such articles. Where

[CONCLUDED ON PAGE 15]

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Leaving the Farm

Letters From Two Readers on a Vital Question

A Young Man's Reasons for Leaving the Farm

DURING the past few years there has been much discussion as to why so many country boys leave the farm. As a rule, this question has been discussed by older men who attempt to analyze general conditions. However, in my reading of eight or nine farm periodicals I have never seen the question discussed by any of the boys themselves.

Since, in order to show my position, I shall have to be very personal, do not take it that I am trying to be a little of a braggart and to herald anything I have ever done or hope to do. I tell my own story, because it seems as if it might illustrate the state of affairs of a great many other farm boys.

I am under twenty. I was born on a farm and went to country school until I could enter the high school in a near-by city, boarding at home and going to town each day on a trolley which runs near the farm. I always did chores night and morning, and spent my vacations working on the farm. One winter I was out of school working at home. After my graduation I went to college, taking the regular course. Just now I am a sophomore and am wondering about what I'm going to do when college days are a thing of the past.

Just here, I want to correct a current idea in the minds of some people to the effect that country boys in college form a class and cult by themselves. Some do. They will not adapt themselves to the conditions at hand. They go about wearing clothes that are years behind the times, with heads in need of a hair cut, using language that they know better than to use. They try to parade their plainness, and lack of means. Such fellows are rapidly disappearing and I'm glad to say that more of that kind in the modern college hail from the city than from the country. In school, it is no crime to be poor, but it is to parade the fact.

Personally, in high school and in college, I have never been made to feel "out of it" because I'm from the country. It has been my observation that the sons of lawyers, doctors, bankers, merchants and farmers meet on equal terms. At college I do not have as many conveniences and as good living as at home, for our home in the country will compare favorably with middle-class town homes.

When in high school I began to go to parties and entertainments with my town school-fellows. The principal reason that I did not associate socially with the country people was not because I felt superior to them, but because there was "nothing doing" in the social line. During the last six years there have not been more than fifteen social gatherings of the young people in our community. Thus, it may be said that I have been driven to town for companionship.

I do not feel ashamed of the farm or of farming. I like both. During the school year I am ever looking forward to home, a pair of overalls and the stock. College, contrary to the popular opinion, has taught me to look up to many phases of farm life rather than to despise everything connected with it.

Financially, farming is the best thing for me, because I can have a fair start in a rich section of the country. At the best, teaching will never bring me more than thirteen hundred to fifteen hundred dollars a year. Newspaper work has almost the same limits, with longer hours than farming. Professional work means several more years of schooling, with many years of living on nothing until one gets established. Professional salaries may look big, but a man can't support a family and live on porterhouse for ninety or one hundred dollars a month. Our family at home lives better than the families of many men who are making fifteen hundred dollars a year or better. Besides, the head of our household with a grade-school education and no start at all is "salting" from two thousand to three thousand dollars a year. So as far as the almighty dollar goes, I'll have to be a howling success or my brothers will come out several thousand dollars to the good while I'm using every cent to live.

You perhaps ask why I hesitate a minute in my choice. You are perhaps saying that I'm too "stuck up" to get down and plow. I deny it. I do it every vacation and like it.

Perhaps I'm sentimental. Some say it's a good quality. However, I've been taught that there is something the matter with a man who seeks dollars to the detriment of culture, religion and all that goes to make life worth the living. Perhaps a few years' contact with life will drive these thoughts of altruism and that sort of thing from me; but I've got these ideals now.

Our neighborhood is like what many others are and still more are growing to be. There are a number of fine old places that were once kept up by their owners who lived on them. Now, many of the owners have died, and the heirs or other new owners either rent their farms or hire some one to farm them.

Despite the fact that this non-resident ownership of farm property shows the interest which capital has in the country, I am beginning to regard it as a curse to country communities. Generally speaking, the renter does not make a good neighbor. About the only desirable ones are those who are renting to get a start.

Take our community, for instance. For a mile or two along the road is a row of these people. They rarely go to church, their usual Sunday occupations are breaking colts and receiving company. They have no libraries. They read little. There is hardly a thing I have in common with them. Thus, the idea of having to live with them for an entire lifetime does not appeal to me. There are some of the old families in the neighborhood, but their children are being trained for the professions while their parents are thinking of moving to town.

I don't think it is over-sentimentality that makes me think, in common with other young men of my age about marriage and a home-life of my own. So I question myself: "Do I want to take my ideal of a woman into such a neighborhood, to associate with such neighbors?" We may be sufficient unto ourselves until the glamour wears off; but there will be trouble then. Again, I sometimes ask: "Do I want my children to grow up in such an environment?" Verily I am a dreamer, but talks with others and my own observations have led me to believe there is a good deal of sense to my dreams.

My brothers do not care for more than one or two of the young men of their age who live near us. The only explanation is that they have nothing in common.

But recently I talked with a college graduate, who with his wife went back to a neighborhood such as ours and farmed. He made money. Now he has children. At present he is thinking of finishing his agricultural studies so he can get into governmental work.

Perhaps I'm mistaken in my attitude, but I cannot think otherwise. However, if your neighborhood is satisfactory, don't move to town, for you will leave a hired man or renter where you ought to be. One person's leaving gives another the fever and so it goes on.

CHAS. SMITH.

A Mother's Reason

THE question uppermost in the minds of the [illegible] writers, if not the readers, seems to be "Why do farmers leave the farm?" The reasons given are various and some writers answer the question with a smack that seems to be final.

But the question will never be finally settled until the educational question is. That is where the wheel turns. Great strides in rural advancement are being made, with rural delivery, telephones, and so forth, but the most vital matter has not been touched, here in central Illinois at least, and that is the school problem. If money could be gotten for the betterment of public schools in the rural districts, the question would not have to be asked so persistently; "Why do farmers leave the farm?"

We have lived on a farm all our lives, a period of half a century, and find ourselves to-day leaving the dear old farm where our three boys were born—and blessings they were. When they were little how happy we were, planning and working for their future. The work was hard, but we enjoyed it, saving and practising all kinds of self-denial that we might have a competence when they got to the age to be educated for a useful life.

But time sped so fast that that time was upon us before we hardly realized it. The two first boys were of school age, good healthy boys, strong in body and mind. They attended regularly. They got to where they were as good as any in the school. The same routine of work was repeated from one school year to another, with nothing to help them on to higher or better things. The question of the future had to be decided some way. One boy was desirous to entering a profession, the other to study for railroad work. Their studies could not be continued anywhere but in the city. There was nothing at home but the three R's to study to prepare them for the work of their choice. There were only two things to do—to leave the farm and move to town or to send the boys out alone for four or seven years as the case might require, which meant a broken family, long separation and lots of money.

Those boys have made a success in their chosen fields of labor. But soon the baby and last one was to go. What was to be done? We could not be left alone on the old farm and could not send him away, so we kept him in the only school that was available until he was past sixteen and then our duty was too plain. Something had to be done, and what else could we do but move to some place where the educational opportunities were such as the boy deserved. So we left the dear old farm home that we all loved, because of the failure of our rural schools to do the work they should do.

MRS. H. E. W.

Agricultural News-Notes

The interest in farming increases whenever it is conducted as it should be.

The United Irrigation and Rice Milling Company of Louisiana recently purchased one million acres of Louisiana swamp land and purpose making it the largest rice-field in the world.

The Maine farmers planted more sweet corn for canning purposes this year than ever before—twelve thousand to fourteen thousand acres were planted, it is estimated.

The boys and girls of Colorado are awarded prizes by the State Agricultural College and the Denver Chamber of Commerce, the boys for the best exhibit of agricultural products, and the girls for canned fruits, jellies, needle-work, etc.

The Arkansas legislature has appropriated three hundred and fifty thousand dollars for establishing four schools of practical agriculture. This amount is to be added to by the citizens of four localities in different parts of the state. No state surpasses Arkansas in point of the number of valuable staple crops that can be grown within its borders.

Prof. H. N. Bolley, the flax expert of the North Dakota Experiment Station at Bismarck, says that owing to the severest drought known for years, flaxseed, for seed, will be exceedingly scarce, although the value of what has been saved is likely to be very great on account of its ability to withstand drought, wilt and canker. This year's seed crop is a demonstration of the "survival of the fittest." *

Get out of the rut

Give your buildings the benefit of progress—same as you give the farm itself. Cover every building on the farm with Genasco Ready Roofing—the economical roofing that protects and lasts.

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is made of Trinidad Lake asphalt—Nature's everlasting waterproofer. It prevents cracks, breaks, and leaks, and does away with damage and repairs. Easily applied without experienced help.

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Trinidad Lake Asphalt
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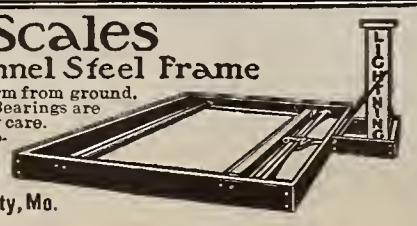
Lightning Pitless Scales

New Pattern. Solid Channel Steel Frame

Channels are seven inches which is the height of platform from ground. Levers are octagon in shape giving greater strength. Bearings are Toolsteel. This scale will last a life time with ordinary care. Equipped with compound Beam Free. Furnished absolutely complete except platform planks. Guaranteed accurate and tested to more than its capacity. Write for our prices and description before buying.



KANSAS CITY HAY PRESS CO., 124 Mill St., Kansas City, Mo.

Farm Notes

Home-Made Concrete-Mixer

"How can I reduce my fence-post bill?" This is a yearly question with every farmer in the country. In regions where timber is high in price the maintenance of fences is a source of great expense and there is, therefore, a constantly increasing demand for some form of post which can be substituted for wood.

Cement and concrete posts seem to meet most nearly the conditions required for a satisfactory fence-post, which are that it must possess sufficient strength, must not be subject to decay, must be able to withstand water, fire and frost, and lastly must be obtainable at a reasonable cost. The latter item, the cost, has, however, put them beyond the ordinary farmer, owing to the expensive machinery necessary for making them. In response to demands from farmers all over the country an official of the Department of Agriculture recently designed a home-made concrete-mixer which greatly reduces the hand labor required, and is

The Mixer With the Detachable Half Lifted

not only better adapted to average farm purposes than the costly patented mixers, but can be made by any ingenious farmer with very little expense and work.

Two pieces of four-by-six form the sills. Upon these two uprights about three feet high are fastened. A one-and-a-half-inch pipe passes through holes bored in the top of the uprights. Upon this pipe the mixing-box is turned, and through the pipe the water is added to the mixture at the desired time. The water is poured in at the top of an upright pipe which connects with the axle pipe. This latter has holes drilled in the lower side of it. The other end of the axle pipe is closed by a wooden plug. The ends of the box are made of pieces of two-by-eight bolted together. A hole bored in the center of each forms the bearings. The sides of the box are made of one-inch lumber, nailed to the ends with twelve-penny nails. One half of the box is made so that it can be detached and lifted off. The detachable half is secured to the other half by means of strong hooks so placed that by slipping this half about an inch to one side all of the hooks are loosened at once. After it is in position the removable portion is held in place by means of a barn-door latch. When removed the lid is hung up as shown in the picture. A rope run over a pulley, with a counterweight on the far end, makes lid-lifting easy.

The driving gear is simple, but very effective. It consists of a rim taken from the wheel of an old rubber-tired buggy. With the tire removed the grooved rim makes a very satisfactory wheel upon which to run a three-fourths-inch rope belt. The belt is driven by a small sheave pulley which is fastened to the countershaft. A belt-tightener is used upon the rope, and by using a very loose belt the tightener is made to act as a friction clutch.

This mixer is driven by a two-horse-power gasoline engine which is belted to the countershaft. The engine runs continuously and the mixer is started and stopped by means of the belt-tightener.

The operator first fills the mixer about half full of sand, gravel and cement in the correct proportions. He next puts on the lid, pushes it into place and fastens the latch. The clutch is thrown in and the box revolves upon the pipe. When three or four turns have been made, water is poured into the upright pipe until the desired amount has been added. By this time the concrete has been thoroughly mixed. The clutch is loosened, the box stops revolving and the lid is loosened and raised. Now by slightly setting the clutch, the contents of the mixer are dumped into the box beneath. The operator of the machine may now refill the mixer, while the other workmen take charge of the mixed material. In this way a large amount of material may be run through the machine and perfect mixing is assured.

Many other systems might be used in place of the rope belt. The main gear of an old self-binder or an old mower gear does well on a mixer. A crank may be attached and the machine turned by hand if desired.

Farmers' Bulletin No. 235 estimates that one cubic yard of concrete will make twenty posts measuring six by six inches at bottom, six by three at top and seven feet long, and if mixed in the proportions 1-2½-5, requires approximately

1.16 barrels of cement, at $2	$2.32
.44 cubic yards of sand, at 75 cents	.33
.88 cubic yards of gravel, at 75 cents	.66
Material for 1 cubic yard concrete	$3.31
Concrete for one post	$ .17
28 feet of .16-inch steel wire, for reinforcement, at 3 cents per pound	.06
Total cost of material for one post	$ .23

The figures for cost of material will, of course, vary with different localities. Counting in labor and cost of molds the total is about thirty cents per post. A concrete post lasts indefinitely, its strength increasing with age, whereas the wooden post, even if treated with a preservative, seldom lasts over fifteen years.

M. Hamilton Talbott.

Grass and Goats in Kentucky

After reading Farm and Fireside's stories of abandoned farms, Joseph Sexton sends us the following slice of experience from Lincoln County, Kentucky:

"It has always seemed to me that a large per cent. of run-down farms, especially in this region, get run down because they have not enough grass on them. The secret of their upbuilding, just as in the cases described in Farm and Fireside, is more grass, more stock, more fertilizer.

"In trying to get grass in our local region here I believe many make a mistake by sowing clover and timothy, for we have a loose, sandy soil full of ground-mice. It takes some experience to get grass here. I have had success by sowing redtop seed in the spring on all waste land. Then I keep my stock on it, which tramp the ground solid. I keep a flock of goats, which keep down the weeds, and I turn the hogs in to root up the green brier roots and really help the grass grow.

"I came from Campbell County in 1901 and found no grass here. My neighbors said grass would not grow here. When I bought the goats, they said they would not have them on their farms. Now I have found that they are as controllable as any other stock, and all the people around are wanting goats. They say I have the best grass in the neighborhood. This seems to me a good poor man's way of building up land."

A Tree That Foraged

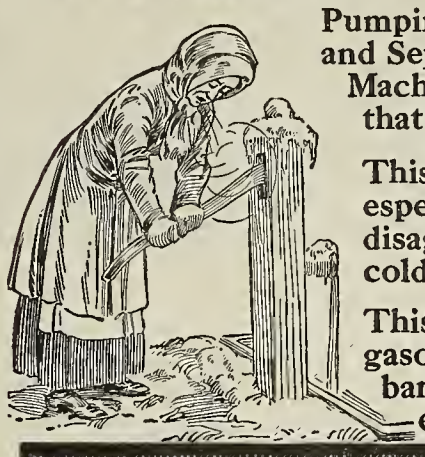
I read with interest what T. Greiner has to say of trees as robbers in the September 25th issue of Farm and Fireside. He says that no vegetables will grow within four rods of his poplars and walnut-trees. I think he will find that trees will send out roots even farther than that if it is necessary to do so for food and moisture. About a year ago I was plowing up an old field that had not been cultivated for fifty years or more. It was covered with a rank growth of broom-sedge. Two years before an old horse that belonged to a traveling "hoss-trader" had got past traveling and had been turned out to die. He wandered into this old field and died. When I plowed through the place where he had lain I found the soil full of roots one inch in diameter and smaller. Upon close examination I found them to be poplar roots that evidently had come from a tree standing at the edge of the forest six or eight rods distant. There was no other poplar tree in sight and the roots had taken complete possession of this small fertile spot, while there were few if any roots where the soil was deficient in plant-food. There were other trees of different kinds standing as near as the poplar, but it seemed that none of them had found the remains of the old dead horse.

A. J. Legg.

Let the Engine Do the Work!

Brighten the Life on the Farm for Yourself and Your Family!

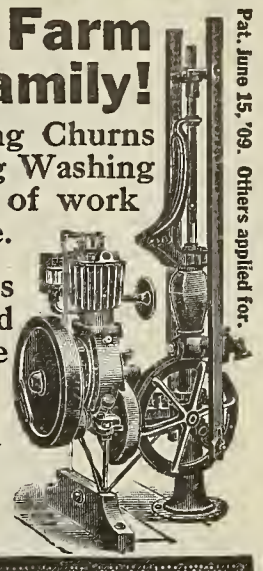
Pat. June 15, '09. Others applied for.



Pumping Water—Turning Churns and Separators—Running Washing Machines—is the kind of work that shortens your life.

This kind of work is especially tiresome and disagreeable during the cold winter months.

This little marvel of a gasoline engine will banish all this drudgery from the farm.



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Here's a "hired man" that is ready to start to work the hour it gets on the farm. Easily moved about. Needs no cement foundation or special setting. Comes on its own base and is ready for work the moment it is set in place. Tank holds day's supply of gasoline. Easy to start and stop. Any child can run it with safety.

Here's an engine that is made as carefully as those used in the best automobile engines. It is air-cooled. Important working parts in metal case.

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Gives continuous supply of water so that ice will not render drinking tanks useless. Brings big dividend on investment through big advantage it gives in stock raising.

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This Farm Pump Engine has four-inch pulley for running hand-power machinery, such as churns, separators, washing machines, etc. Just as useful to the women as the men. Will clip hours from their work every day. By saving labor it saves health.

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Connected with any force pump, a Fuller & Johnson Farm Pump Engine will give you ample protection against fire for either your house or barn or other farm buildings. Throws water to top of roof with a steady stream. Will pay big dividend in reducing cost of your fire insurance.

Don't Delay! Order a Fuller & Johnson Farm Pump Engine Today

Get the benefit of this powerful labor-saver during the winter months. It will not only pump all the water you want—800 to 1,000 gallons per hour when attached to any force pump—but will also lighten your work in numerous other ways. Just the thing for a little workshop. Will run a small lathe, saw or grinding wheel in a way that will surprise you.

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Offer No. 1—Send us $1.00 for a three-year subscription to Farm and Fireside and a copy of our great book, "Farm By-Products." We will send you **Without Cost** a set of 25 Thanksgiving Post-Cards.

Offer No. 2—Send us $1.00 for your own subscription to Farm and Fireside and of two neighbors, and we will enter all three for one year each, and will send you a copy of "Farm By-Products," and also will send you, **Without Cost**, a set of 25 Thanksgiving Post-Cards.

Send your order at once to

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Another 25,000 "Farm By-Products" Books Now Ready. Get Your Copy Without Cost

ALREADY thousands of FARM AND FIRESIDE readers have obtained their copies of "Farm By-Products," the wonderful new book published by FARM AND FIRESIDE. And these wide-awake farmers are now preparing their by-products for commercial use, rushing them to market and getting cash in return. Other farmers all over the land are clamoring for copies of "Farm By-Products," which tells all about FARM AND FIRESIDE'S wonderful discovery, and describes the dozens of valuable by-products which exist on every farm. Our printers have just delivered to us another 25,000 copies of the book, which we shall distribute at once among our subscribers. You can get one of the books without cost, post-paid, if you act at once.

Your Farm Will Yield Many Valuable By-Products

The Discovery

FARM AND FIRESIDE Editor Herbert Quick made the remarkable discovery that has led to the publication of "Farm By-Products." Editor Quick found that on every farm there are dozens and dozens of by-products which go to waste. He found that the by-products on the average farm, if properly marketed, would add hundreds of dollars profit to the farmer every year.

Farmers know what by-products are. Manure is a by-product. So is straw. So is skimmed milk. These are not wasted, because the farmer himself can use them. But on every farm there are scores and scores of other immensely valuable by-products that rot and waste each year—things of no use to the farmer, but which millions of people in cities stand waiting to pay for with cash.

FARM AND FIRESIDE arranged with forty-one different men, in all parts of the country, to find out all that they could about the various salable things that were going to waste on farms.

267 Different By-Products

These men have discovered 267 different by-products. Think of it! 267 profitable farm products that most FARM AND FIRESIDE readers to-day actually allow to go to waste! 267 products which FARM AND FIRESIDE families can turn from waste into profit!

These overlooked products, which are known as "By-Products," are not only numerous, but they are present on every farm in such wide varieties as to demand the attention of every man, woman, boy and girl who lives on a farm. Every FARM AND FIRESIDE family should at once begin to market its by-products. For by-products are the best profit payers of all, and can easily be made ready for selling.

A Few Secrets of "Farm By-Products"

"Farm By-Products" tells how to cash in on scores of things you pass over every day as valueless. Do you know that high prices can be obtained for the barks of dozens of our common trees, many of which you will find right on your farm? Scrub growth trees yield a product that has an important market value. "Farm By-Products" tells all about this new field of farm profit.

Easy Money for Women Folks

Dozens of home products that you know all about, but have never thought of as valuable, bring good prices in cities if you only know where to sell them. "Farm By-Products" gives a long list of such products, including kitchen products easily made, a dozen products of the dairy, garden and fruit products, dyes and many other items that we have no room to mention here.

Many other farm by-products can easily and quickly be turned into money by the women folks. Many products you think worthless, when properly handled, bring high prices in the cities among city folks who desire things that have come from the country.

Cash for the Boys and Girls

The boys and girls can make lots of money from the waste products that they will find on the farm and which they can convert into cash with the aid of "Farm By-Products." Farm folks don't realize all the things that grow or can be found on the farm, that city people want and are willing to pay for. Boys and girls, can you pick milkweed? Could you grow sunflowers? Could you gather corn husks? Could you do a dozen such easy things if your were paid big money for doing so?

Note This, Mr. Practical Farmer

Count the number of different products you now actually sell. Then go out in front of your house and count the things you see that you don't sell. You don't sell any weeds now, do you? You don't sell those old fence rails now. You don't sell the bark from any of those trees in the woodlot. You don't make any money out of that bog. But you can make profits out of all these things and dozens of others right on your farm, without investing a cent. **You don't even have to invest in "Farm By-Products"—we give it to you.**

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Every reader of FARM AND FIRESIDE who sends his renewal subscription to FARM AND FIRESIDE in the next 15 days will be presented with a copy of "FARM BY-PRODUCTS" postage prepaid by us. We can not promise to give away a single copy after that date.

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Send $1.00 for a club of three different yearly subscriptions to FARM AND FIRESIDE. You will receive our new book, "Farm By-Products," without cost, postage prepaid. You will also receive 25 beautiful Thanksgiving post-cards without cost, postage prepaid.

OFFER No. 3

Send 50 Cents for a one-year subscription to FARM AND FIRESIDE. You will receive our new book, "Farm By-Products," without cost, postage prepaid.

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Ten Dollars Reward!

We guarantee that at least a dozen of the by-products contained in our book "Farm By-Products," can be marketed from any farm in the United States of 50 acres or more. We will cheerfully pay a forfeit of $10.00 to any farmer operating a farm of 50 acres or more, who can prove that our guarantee does not hold true of his farm.

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FARM AND FIRESIDE, Springfield, Ohio

Gardening

By T. Greiner

Weather vs. Skill

WE MAY brag of our skill as gardeners. A good gardener can usually grow good vegetables and a full supply of them any year. There may be delay on account of weather; but finally he will "get there" just the same. But he is not entirely independent of the weather, and much of the quality and amount of his products hinge on atmospheric conditions.

A year ago last spring I found it almost impossible to grow really good lettuce. Dry and hot weather does not agree with that crop. Last spring we had some fairly good lettuce, such as Prizehead, May King, etc. We could have had it all summer. The "season" was favorable enough, and it came freely into our markets and brought good prices even in late summer. But I have never had finer lettuce, and a finer supply of it, than we have now and have had for some weeks. The superior quality is due in some measure perhaps to the variety, a particularly fine and improved strain of the Big Boston, received from Long Island (Beaulieu), but in a larger measure, no doubt, to the particularly favorable fall weather. Seed was sown in August. The plants were left to stand rather thickly in the row. Yet there are as nice solid heads as any one could ask for, and sometimes these heads stand so close in the row that they crowd one another out to right and left, just as onions will do when four or five of them stand in a bunch in the row in rich soil.

It is often said that, in order to grow large solid heads of lettuce, the plants must be transplanted. There does not seem to be anything in that. I have just as good and hard cabbage-heads that grew where left by thinning out the surplus plants in the seed rows as in the regular patch where plants had been set out in the old way.

The fact is that it is well to take some chances with the weather in certain cases. When taking up cabbage-plants out of a seedling row where the plants left will have a fair chance, it is but little trouble to leave some good plants at proper distances and let them head. In August or early September we always have some available garden-spot to sow a row of lettuce. Seed does not cost much. It will pay us in these cases to take our chances. If the weather is right, we get some good vegetables easily and cheaply.

About the Manure Problem

The spot on which I have the very fine lettuce spoken of above is a part of the patch prepared for and sowed with white Portugal onions (for next spring's green onions). This patch was just "smothered" with old stable manure and limed, besides. I don't remember of having ever manured any piece of ground for any crop so thickly before. But it seems to bring the results. I read occasionally about Eastern market gardeners using two tons of high-grade commercial fertilizers to the acre for celery and other garden crops. This almost looks like a criminal waste of plant-foods, for the two tons contain many times the amount of nitrogen, phosphoric acid and potash that even big yields of our garden vegetables remove from the soil. An average onion crop, for instance, takes up hardly more of these plant-foods than an ordinary grain crop does. But the cost of the manure application, no matter how lavish, is of little consequence in view of the results from it. If we succeed in getting a good stand of White Portugal onions from seed sown in early August, on one tenth of an acre patch, we could easily take from it in May and June following fifteen hundred dozen bunches of green onions that will readily sell for twelve and a half to fifteen cents per dozen, wholesale. Figure out for yourself what the gross returns are, and then tell me whether you would hesitate to expend ten or fifteen dollars for manure to secure such returns.

The first crop, besides, is not all you get for your outlay for plant-foods. You have put that patch in shape to give you big crops of anything you might wish to grow on it, with additional light applications, for years to come, really indefinitely.

Save the Odds and Ends

When this appears before the reader's eyes, there will be very little left in the average home garden in the Northern states. Most of the crops are cleared off, and most of the land has been, or should have been, plowed as a means of reducing insect injuries for next season and of getting the land in all the better shape and well "weathered" or acted upon by frost, moisture, and so on, for next year.

In some gardens, however, we will find a lot of odds and ends left out, such as the remnants of the table beets, mostly overgrown specimens that are considered worthless for any use, also overgrown left-over kohl-rabi, small squashes and pumpkins, half-developed or stunted cabbages and things of that sort.

These things ought to be taken off the land, anyway. Some of them, like cabbages and cabbage stumps, old radishes, etc., may and probably do contain root maggots or other undesirable members of the insect world, and these should be destroyed. But most of these odds and ends and rubbish have also some value for stock. I always gather up all old beets, and with them the old kohl-rabi, and small squashes, etc., also the remnants of tomatoes, if any. All this stuff can be utilized for feeding cattle and to furnish bulky food for our fowls.

Keeping Tomatoes in Lime

Some years ago it was recommended to keep tomatoes in slaked lime in the following manner. Select nice full-grown specimens that are nearly ready to color up for ripening. If of the Honor Bright class, they should be just a nice lemon yellow. All specimens should be perfectly sound, without spot or crack. Take a box of any size desired. Put in it a layer of slaked lime. On this spread a layer of the tomatoes, close together without touching one another. Cover them with another layer of slaked lime, then another layer of tomatoes, etc., until the box is full. Store it in a cool dry place.

I have a faint recollection of having tried this, but failing to get the looked-for results, did not repeat the trial. I wonder if any of our readers ever tested this method and with what results. I have an idea that if the specimens are wrapped singly in paper and then packed in the manner described, some good tomatoes might be saved for a long time and be had on the Thanksgiving and Christmas table. They should be taken up a few days before the time they are wanted and exposed to the light (sun if possible) in a warm room for ripening and coloring. The plan seems to me promising. I am just now putting up a box in that way.

Planting Small Fruits in Fall

I am frequently asked about the best time of setting out berry-bushes. There are always some people who wish to set them out in the fall. I usually prefer spring for such work, yet am well aware that such things as currants, gooseberries, blackberries and raspberries, also rhubarb and asparagus, can be planted successfully in the fall of the year, preferably somewhat early, but any time before the ground freezes up permanently. Just now I have a lot of currants and gooseberries, in a spot some distance from the house. For that reason they have been somewhat neglected, and the fruit has also been exposed to the pilferings of youngsters of the vicinity. I must get them closer to the house so that they will be under observation and receive better care. So I am now taking them up with as big a chunk of soil as will adhere to the roots. I put the big plants, now in their fourth year, on a stone-boat and transfer them to the new location. I expect that this transfer will not hurt them much and that they will bear a moderate crop of fruit next year. Doing this work in the fall while the bushes are entirely dormant will give them a chance to recover their equilibrium and good nature before spring starts them into active life again.

Good Early Tomatoes

Among the new tomato varieties introduced last spring are the Floracroft and Northern Adirondack, both apparently strains of the Earliana. The specimens are of good size and quite smooth. I have gathered a little seed of each of them and am hardly prepared to say which is the better. The tomatoes are solid, too, and of good quality. Let us understand, however, that this class of tomatoes needs heavy feeding if we want highest quality. We can not do it on poor soil. We can not do it even on soil of just "medium fertility." The soil must be rich. If it contains humus enough to be of good mechanical texture, chemical fertilizers alone will give good results. My way, usually, has been to set the plants and then apply a good lot of rich manure on top as a mulch, spreading it well around the hills so that it will be well worked in during cultivation.

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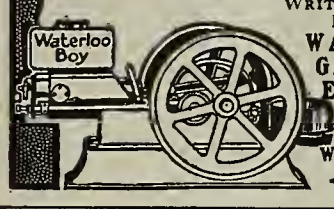

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Fruit-Growing

Protective Plant Insurance

A FRIEND of FARM AND FIRESIDE, writing from Bates County, Missouri, very pertinently calls attention to the enormous aggregate annual loss occasioned by winter-killing of small fruits, flowers and shrubbery that in considerable measure could be prevented by artificial protection.

Even in the middle states and farther south loss frequently results from the alternate freezing and thawing and sudden frigid waves which reduce the stamina and reproductive power of the plants even when the reproductive parts of the flower buds are not destroyed.

Strawberries suffer most frequently from winter injury and should be protected with a mulch of straw or marsh hay free from weed-seeds, corn-stover, pine-needles, sea-weed or forest leaves. In wind-swept locations weighting with brush or poles will have to be resorted to.

The mulch should be fully six inches thick in the sections of most severe frost where but little snow lies. Farther south and where deep snows are the rule two inches of mulch will be sufficient. The mulch should remain until the fruit is picked as a conserver of moisture and an aid in keeping dirt and grit away from the berries. After danger from frost is past in the spring the mulch must be drawn back slightly from the strawberry crowns.

The mulch should be applied in the North as soon as the ground is sufficiently frozen to hold up a team and farther south when the plants become dormant, not far from December first.

Cane berries—raspberries and blackberries—can be insured against winter injury with a heavy mulch applied after the ground freezes. The effect is to prevent rapid changes of temperature in the soil. Where the new wood kills back, laying down of the canes is a surer safeguard and does not require so much labor as many imagine. The approved method is to carefully bend the canes down as near the ground as can be done without breaking and fasten with just sufficient earth to hold in place. Then cover with a plow as nearly as possible, finishing with a shovel. Where the rows run north and south begin at the north and bend all canes in that direction.

In the case of blackberries or very stiff canes of other varieties a forkful of dirt removed at the root on the side toward which the canes are to be bent will lessen liability to injury. Cane berries handled in this manner, other conditions being right, can be counted on to give good crops nearly every year.

The more tender varieties of grapes can be profitably laid down and covered or, where the number of vines is limited, they can be protected with corn-stover placed each side of the trellis or support. Protection of the kinds above described, by mulching or otherwise, can be made a safeguard against late spring frosts if the mulch or covering is left in place as long as can safely be done without endangering the new bud and leaf development.

Currants and gooseberries, except a few tender varieties, seldom need winter protection unless to prevent breaking down by deep snows and sleet storms. The bushes may be protected from such injury by tying them together with binder-twine into clumps. Cane berries, where not in danger of frost injury, will escape damage from winter storms and come through in better condition where the hills or clumps are thus tied.

What has been said of protection for small fruits can be applied to the less hardy flowering vines, bushes and herbaceous plants, with some deviations. Those of the climbing roses and vines on which the new wood winter-kills more or less should be laid down and covered with straw, leaves or other porous light covering. Rye-straw or any long straw, placed around rose-bushes or tender ornamentals and held with an outside wrapper of burlap, will keep them safe.

The plan of setting flowers, climbing plants and ornamentals generally, on the sunny side of the buildings is a mistaken kindness since the effect is to cause a radical temperature change during the warm days in late winter, when a spring-like midday is sometimes followed by zero night temperature. Artificial protection is the only surety in such cases.

For the fullest commercial success few fruits, flowers or ornamentals can be made use of except those adapted to the climate and environment, but for interest and pleasure nothing adds greater attraction to a fruit or kitchen garden or home grounds than a few plants, trees or shrubs not adapted naturally to the climatic region in which the home is located. By selecting the most hardy sorts and giving winter protection by wrapping the tenderest shoots in straw and burlap or laying down and covering, the peach, apricot and even the fig can be grown and fruited on a small scale far north of their natural habitat.

By beginning when the shrub or tree is young and tender it will readily adapt itself to being laid down winters. Cutting some of the roots on one side, adaptive pruning, bending down and pinning the branches close to the ground will make quite a large tree or shrub subservient to this mode of winter protection. Of course, provision for substantial tying or bracing must be made for the trees when restored to upright position in the spring.

Another aid to success with half hardy trees and fruits that will otherwise ordinarily be so far advanced in spring as to endanger their flower buds is to plant them on the north side of walls, buildings, evergreen wind-breaks and hedges. By training low to keep them shielded from the developing influence of the spring sun and in conjunction supplying some winter protection, tender fruits and flowers can be made to afford cheer and beauty where otherwise it were impossible.

B. F. W. THORPE.

So Rot Can Not Spread

FOR packing apples to last over winter I cut newspapers in pieces a foot square, and as I grasp each apple, put the blossom in the middle of the piece, bring all four corners together over the stem, and place the wrapped apples in close layers in a tight barrel, stem down always. When the barrel is full we head it up and store in a cool place. Apples so packed can not touch each other, and if one rots, it will rot alone. I have taken apples out all mushy, moldy and rotten, and all the others around it solid and unspecked. Apples thus packed will stand long storage and I have had them to eat and sell in May. I have packed Fallawaters, Lawvers, Baldwins and other good keepers, and often sold barrels thus packed in the original package higher than other grades; but they were packed honestly and variety marked on the barrels.

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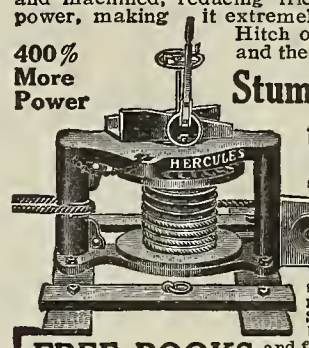

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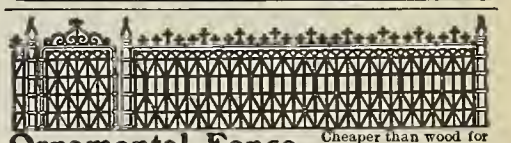

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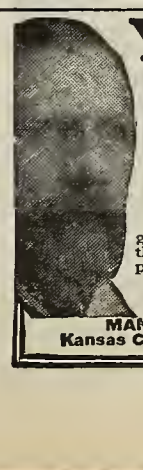

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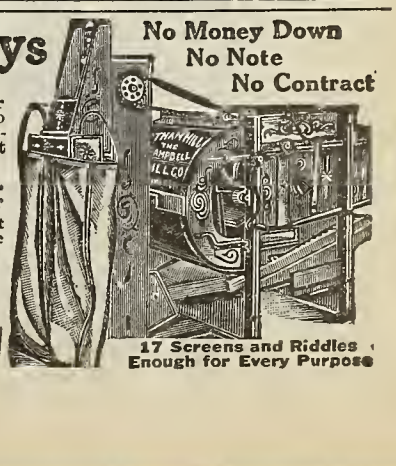

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Poultry-Raising

The Poultry-Yard in November

PULLETS hatched in March and April should begin laying this month. The hen-house should again be sprayed with lime-sulphur or other disinfectant. Provide the hens with warm sunny quarters, dust baths, boxes of shell and grit and plenty of litter to scratch in. Clover-hay is best and should be changed every third or fourth day. On cold mornings the laying hens should not be allowed out until the sun is high.

Raw cabbage, carrots, beets or small potatoes should be provided under cover where the fowls can peck at them. The proportion of animal food in the mashes may be increased. I use one teacupful of beef-meal to two quarts of bran or other bulk, for a noon mash. If, however, there should be any signs of bowel trouble, the beef-meal should be lessened and the affected birds put upon grain diet for a few days.

During the first week in November the young cockerels intended for roasters should be confined, six or eight in a coop sufficiently large to allow them to stand erect and move about. Their feed should be corn fed warm and cabbage or beets chopped fine. Give them all they will eat three times a day with plenty of drinking-water. Birds that do not come to weight in time for the Thanksgiving market must be liberated. They will fatten more easily for the Christmas market.

Sods about six by eight inches may be cut and laid in shallow boxes and placed under glass. They should be sprinkled frequently with warm water. This growth is relished by the hens in December.

M. ROBERTS CONOVER.

Why Hens Strike

A WEST VIRGINIA stockman, farmer and poultry-raiser wants to know by what conjury it is possible to get hens to lay fifteen dozen eggs a year, as some of mine have done whose performance I described in a past issue. He thinks if he could make his thirty hens lay one hundred eggs each he would soon be able to take an indefinite vacation. He says the West Virginia hen lays eighteen to twenty-five eggs, then bums around several weeks. I think some West Virginia rooster should have him jerked up for libel. If his allegations be true as to his own particular hens, it is plain proof that he is not on the job and he should dismiss himself, then engage a competent fowl shepherd to assume charge of the flock and cultivate its profitable qualities.

The hens should not be blamed if they produce only five or six dozen eggs in a year. The fault is with the feed and care they get. This gentleman does not state how he cares for his hens, but I suppose he gives them a fair chance to look out for themselves.

When the farmer of the present day undertakes to produce good beef at a profit, he first procures a breed of cattle that has been bred up for beef—cattle that will produce the most beef in the shortest time from first-class feed. Then he will see that they get that sort of feed, together with proper shelter and other necessities. The man who expects to produce pork at a good profit does the same thing. Then why should not the man who is producing eggs or poultry for market?

All other farm animals get proper care, but many farmers think the hens can look out for themselves, because one doesn't expect any profit from them, anyway. If a man gives his hens such food and care as years of experience has proved to be right and gets from them the full measure of profit they are capable of yielding, he is regarded as a sort of a wizard or fake.

There is no valid reason why the West Virginia hen should be one whit behind the hens of any other state in the production of eggs. At the prices our correspondent quotes for eggs and young chicks he should be able to make his hens pay at least four dollars profit a year each. If his hens are so run down that he can not make it from them, he should get rid of them and start in with good new stock. By good stock I don't mean the ultra-fancy stock bred for show purposes, but stock bred for business. Then when he gets the stock he should give it the care and management that will get results.

The poultry-raiser can put it down in his day book that he will not make a bunch of hens pay a big profit unless he takes first-class care of them. He will not need to buy fancy "scratch foods" and other high-priced stuff. Good farm produce will do the business, if it is supplemented with such care and management as is given other stock to make it profitable.

FRED GRUNDY.

Freedom a Fine Fattener

THAT there are so many failures in fattening turkeys for market is not at all surprising to me, when I see the way a great many farmers go at it, taking the turkeys off the range and placing them in a closed pen. Turkeys are of a wild nature and as soon as they are cooped in close quarters they begin quarreling, chasing one another and constantly hunting for a place to escape. They lose their appetite and consequently there is no gain.

Some believe the only way to fatten turkeys is to keep food before them all the time, such as shelled corn. They are generally disappointed in results, as many of the birds sicken from this heavy feeding.

The best way I have found to fatten turkeys is to let them have their liberty, and begin about four weeks before market-time feeding corn on the cob, the cobs being broken up in two or three pieces. This corn is better if of last season's crop, and at no time would I give them quite all they would eat. By feeding corn on the cob the turkeys are kept busy and do not roam away so far. Feed sparingly the first week and after that a little more freely, and often the second week feed at noon, also. In addition to the corn I would give them wheat, oats, barley or a mash of boiled potatoes and corn-meal, and to this add for every twenty-five birds a handful of oil-meal and three handfuls of beef-scraps. Feed this in long clean troughs and have a supply of grit, charcoal and pure water handy. In fattening turkeys the main point to bear in mind is to keep them healthy. If we do that, they will be full-breasted and in good market condition after four weeks of this feeding.

V. M. COUCH.

There is no profit in keeping ducks after Christmas. Therefore, market during December.

Did you ever try chopping up celery for broilers? It makes great eating. Folks that have tried it find no difficulty in selling at big prices about Christmas-time.

It will pay any man with hens to go in debt for shingles for a scratching-shed during the wintry season, rather than do without one. A wet, cold hen will not lay, but the one with a warm, sunny scratching-shed where grain is hidden in piles of leaves or straw, where cabbage is hung on a string and where grit and old plaster may be found, with an occasional feed of cooked meat, will lay eggs and cackle with joy.

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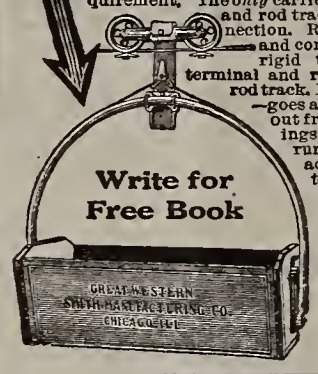

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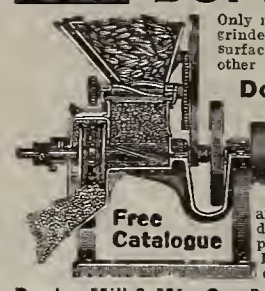

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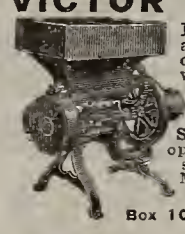

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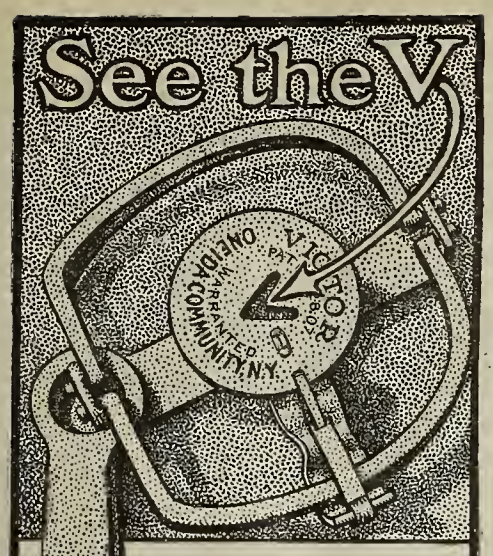

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Live Stock and Dairy

Cow Prices

SOME folks are talking wonderingly about dairy heifers selling for seventy-five to one hundred dollars each and good cows bringing one hundred and twenty-five to one hundred and fifty dollars. There is no marvel about it at all. They are bringing these prices because they are worth them. The breeder who produces these superior animals is entitled to a profit on their prime cost. Even at one hundred dollars each the breeder is not getting rich very fast raising heifers to the two-year-old class. Feeds and labor and living are costing too much.

Relatively it is costing the farmer as much to live as it does the city man. His quart of milk, pound of butter, dozen of eggs, ham and bacon cost him as much to consume as they will sell for.

These heifers and cows all come under the universal law of high cost of living, and the good cow is selling for one hundred and fifty dollars because she is worth it, and because the breeder has not chosen to compete with himself by oversupplying the market. We have seen times when cows were a drug on the market. Two were for sale and only one asked for. Calves were turned into veal instead of being reared into cows. The supply was lessened. Milk production decreased. Scarce milk made dearer milk, butter and cheese. When prices of cow products advanced men wanted the cows—and they want them now, so here we are.

It is a fact that the agitation that has been stirring up the milk question for a number of years, so that the demand has come for purer and better milk, has enormously increased milk consumption. It is a fact, also, that the increase of cows has not kept pace with the increase of consumption or the increase of population; so that it is a third fact that there is a real shortage of cows.

But buyers of cows want good, special-purpose cows, for, as they have to pay considerable money for the cow and feed her costly feeds and tend to her with expensive labor, they want a cow that will pay sure dividends. They want an up-to-date cow fact and not a dairy theory.

And such an animal is not made from haphazard breeding, the meeting of a male and a female, but it comes from using males of inherited worth, with pedigrees of well doing giving them a charter to be sire to offspring that shall add wealth to the world by changing the crude feed products of the fields into the choicest food substances of the table.

This good cow is coming in response to the economic demand that requires a displacement of the other cow of no profit, and the man who has been producing the latter may well note the drift of animal husbandry and turn his attention from the drag of the old to the lift of the new.

W. F. MCSPARRAN.

Winter Pigs Without Milk

IN THESE days when the hog has assumed the position of a porcine prince, farmers, particularly outside the corn belt, are constantly on the lookout for hints which will help them to make pork more economically. E. O. W., Morgan County, Ohio, has related his experience which will be of special interest to those who are long on fall pigs and short on milk:

"I see a good many inquiries as to how to feed pigs in winter, and others ask if it can be done with any profit to the feeder. After selling my best pigs for breeding purposes in November, 1908, I had three of the smallest ones left. They were not salable, though they were thoroughbreds.

"I did not have milk for them, so as a substitute I bought middlings and oil-meal, making it about three parts middlings and one part oil-meal. I gave them one quart night and morning in lukewarm dish-water and a small ear of corn each through the winter and on in the spring until grass came. By that time I had a fresh cow and some milk to go with the dish-water, so the corn was cut out. The pigs were then good shoats weighing better than one hundred pounds apiece.

"As soon as corn was in roasting-ear stage they were given one stalk of corn each as long as they would eat it, fodder and all; then when it got too old ear corn was fed them, being put on full feed by degrees. I killed the smallest in October, 1909, when it weighed three hundred pounds. The other two in November, 1909, weighed four hundred and four hundred and forty pounds. Those hogs were raised almost without milk. Some would say this could not be done. I would much rather try pigs without milk than without oil-meal. If both could be fed, it would be better than either one separate. I do not see any reason why good results can not be obtained with winter pigs handled in this way, either for stock or marketing purposes.

E. O. W."

The results accomplished by E. O. W.'s handling of his pigs appear satisfactory, but is it true economy to feed pigs eight months—from October until grass comes—as he describes to produce shoats weighing only about one hundred pounds? Many successful pork-makers contend that unless an average of a pound a day is made during the first six months of the pig's life the fullest value of the feed consumed is not secured.

The most profit realized in our experience growing pigs outside the corn belt has been secured by keeping the youngsters going up to a safe limit without a check and making the pigs reach close to three hundred pounds in May or June when the local markets were keen for fancy pork at a figure above the regular market. Such results were secured by feeding a ration closely approximating that fed by our correspondent, but giving all the pigs could safely take care of.

A Rejoinder to Mr. Gilbert

A LETTER from Mr. C. W. Rook, Sebastian County, Arkansas, criticizes one statement of W. R. Gilbert's article "From Oil-Mills to Feed Lots" published in FARM AND FIRESIDE of August 25th. Said Mr. Gilbert, "Besides hulls, cotton-seed cake is apt to contain sometimes a quantity of cotton-wool which is very dangerous and has sometimes caused the death of stock."

Mr. Rook writes: "By 'cotton-wool' I presume cotton-lint was meant. While Mr. Gilbert doubtless knows more than I do about many things, on this cotton-seed matter he is a little off. There have been but few nights of my life that I have slept more than a mile from the cotton-fields, therefore I feel that I should know something about cotton and cotton-seed. Cotton-seed will kill hogs. When I was just big enough to go about the barn I was taught never to leave cotton-seed where the hogs could get it. One feed of cotton-seed is not fatal, but after eating it for two or three weeks the hogs die. But it is some poisonous principle and not the lint or the hulls that do the work, for hogs chew the seed, then spit out the hulls and lint.

"In regard to cattle feeding, as poor as I am I would be willing to pay for all of the cattle that would die from eating the lint that cotton-seed meal contains. Every cotton-field has a portion of its crop frosted. Sometimes this is not all gathered, but the farmer turns his cows in to eat it. There may be as much as a bale on thirty or forty acres. And perhaps five or six cows will eat all of this 'scrap cotton' by the middle of January. Individual cows sometimes eat two hundred pounds of cotton and live on as if they were eating hay and corn. Now how is the little lint that gets into the cotton-seed cake (if any ever does get there) to hurt them?

"This is not written for the benefit of the oil-mill men, for they do not need any help to get along. I write it for the benefit of those who need a good cheap feed. Cotton-seed cake (or meal) is all right for cows or horses either."

Don't joy-ride in your automobile when you ought to be moving the manure in your barn-yard out into the hungry fields.

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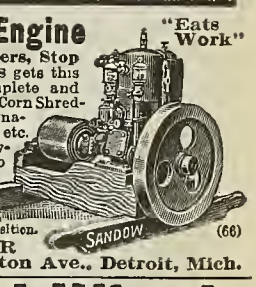

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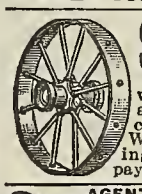

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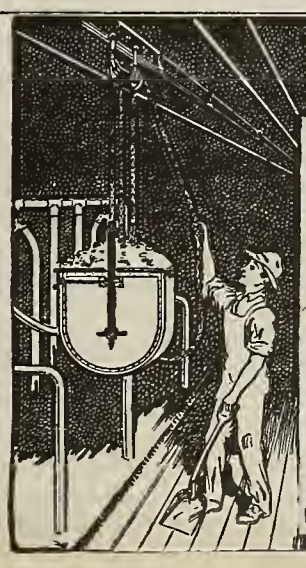

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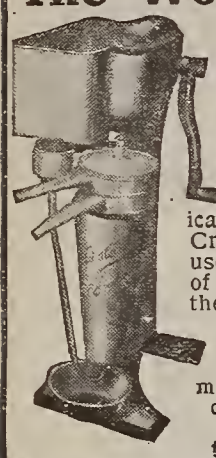

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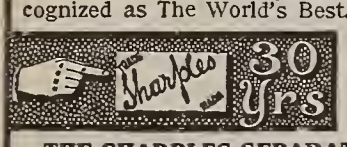

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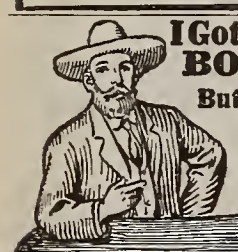

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Live Stock and Dairy

Root Crops for Ewes and Lambs

In this article I want to be allowed to deal with root cultivation in some detail, because I think that their value as food for both sheep and cattle has hardly yet met with the general recognition in this country which is their due, and that this is partly owing to the fact that the best methods of their cultivation are not commonly understood.

Under the head of roots, turnips, mangel-wurzel, sugar-beets, in districts where the roots are manufactured into sugar and the pulp is easily and cheaply obtainable, and cabbages have to be considered as food for sheep and cattle. I need say nothing here as to cabbages, because every farmer, and nearly every housewife, knows better than I do how to grow them; nor as to sugar-beets, because their cultivation has become a sort of special industry.

The place of roots in every crop rotation—and there can be no good farming unless a fixed rotation is adhered to—is between some two straw crops, for the acts of husbandry necessary to their cultivation are specially adapted to the cleaning and fertilization of the soil. Roots being herbaceous and depending largely on their leaf capacity for healthy growth require ample space to grow in, and this space enables us to stir the soil constantly and keep down the weeds by the use of the horse hoe. Turnips and mangels should be allowed from twenty-four to twenty-eight inches between the rows, and from eight to ten between plants in the rows; and though these may appear wide spaces for such small roots, yet experience has clearly shown that the heaviest crops are always secured by observing these distances.

The first process after the harvesting of the straw crop is to get rid of the weeds. The Scotch farmers have probably taken the most pains and met with the most success in growing roots as food for cattle and sheep, and I will try, as shortly as possible, to describe their methods.

The seeds of most weeds, annual and perennial, ripen and are shaken to the ground during harvest operations. If, as is so commonly the case, the stubbles are turned under by a deep plowing, these seeds are buried deep, to make their appearance in a luxuriant crop of weeds among the next grain crop. To obviate this, as soon after harvest as possible a broad-share plow is run over the stubbles and a very thin paring is turned over, and the ground left in this condition for some time. In a fairly moist season the annual weeds will soon appear above the soil, while the perennials will have been torn or cut off at the roots. In due time the plow or, better, a cultivator will loosen the soil so that the harrows and roller will break it up and bring the roots of the weeds to the surface where they can be gathered into heaps and burned. If these processes are properly and thoroughly carried out, the farm-yard manure can be carried to the field, spread and plowed in ready for the beneficent action of the winter's snow and frost to mellow and help to disintegrate the soil. When spring comes a cross-plowing and thorough harrowing should be all that is needed to insure a thorough and minute pulverizing of the soil—in farm language—a good "tilth." Any weeds which may have appeared since winter must, of course, be got together with the harrows and destroyed. This mode of cultivation is applicable to all root and forage crops, except clover, which is sown with a grain crop in the spring.

There are two species of turnips, the rough leaved, including the "common" white and the yellow, and the smooth leaved, swedes or ruta-bagas. There are many varieties of both species. Of the swedes the "Purple Top" is the most

A Store, or "Pit," of Turnips (Cross Section)

The straw is held down by ropes, sometimes run diagonally or crossing, and fastened to pegs

popular in the cooler climates, and "Laing's Improved Purple Top" in the South. Of the white varieties the "Common White Globe" and the "Stone Globe," the latter being the most hardy, and of the yellow, the "Yellow Globe" are highly esteemed. It may be said, however, that almost any variety now on the market is good, if only the seed is pure and fresh.

Swedes can be sown at any time from April to June, according to location, the state of the weather, which should, at least, be moist, and the state of preparation of the ground. The earlier turnips are sown, the less danger from mildew need be feared. The yellow and white common turnips are generally sown after the swedes, though they ripen earlier.

From four to seven pounds of seed are usually sown, the amount varying according to the method of sowing. Broadcasting has properly become obsolete. Where only a very few acres are needed, dibbing (or dibbling) is a good method to adopt, as it saves seed. Care must be taken to keep the rows perfectly straight, distances between the plants in the rows even and the depth of the holes dibbed, uniform. This method facilitates the use of the horse hoe, does away with the necessity of dividing the young turnips into bunches before singling, a process which has to be gone through when they are drilled, and as only three or four seeds are dropped in each hole, it saves a great amount of labor in the singling. Where many cattle and sheep have to be wintered, drilling with a machine which will also deposit artificial manure is the best method of sowing.

Singling, which is done after the plants have attained to their second pair of leaves, is an operation requiring much care. It is done by a pushing movement of the hoe, but frequently the fingers have to come into play. There is a prejudice in America against women or children working in the fields, but I can not help thinking that where labor of that kind is used in mills and even more unhealthy places, such light work as singling plants in the sweet open air can only be objected to under the influence of mistaken sentiment. I have employed many good women and children in the fields, and have always found them thankful for the chance to earn money—and I never counted it cheap labor.

An eight-inch short-handled hoe is best for singling, and if a plant chances to be loosened, the earth should be drawn around it and carefully pressed down. One or two hoeings between the plants will be needed to keep down the weeds and loosen up the soil, and the horse hoe should be sent along between the rows as often as needed, which will be until the leaves prevent its free passage.

Farm-yard manure, ten to twenty tons to the acre, is best applied, if plowed in as before mentioned, in its long condition; but if left until the spring plowing, it should be as well rotted as possible, as immediate action in forcing the young plants is needed. Superphosphate has proved itself the best artificial fertilizer for roots to the extent of from two to two and one half hundred-weight to the acre. It should be applied at the time of seeding and is best effected by the use of a drill which deposits it at the same time as the seed. It should be mixed with some dry earth or ashes. Common salt to the amount of two or three hundred-weight to the acre is of great benefit as an additional stimulus to all root plants and most of the legumes.

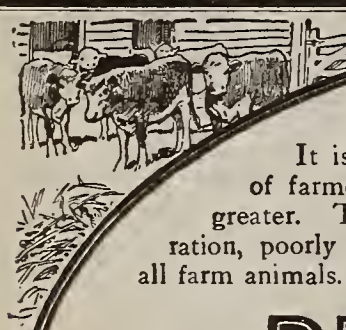
The white and the yellow turnips should be ready by September or early in October for storing, and the swedes or ruta-bagas will best be left to grow until heavy frosts are threatened. They will stand light frosts pretty safely, but if stored while affected by even the lightest, they will be sure to rot. Roots store better in the manner indicated in the rough sketch than in cellars. The store (or "pit") should be built near the homestead, on high ground that admits of easy drainage. If the sheep-yard is a distance from the homestead, two stores, one near each, had better be made. The roots are covered with a layer of straw six to eight inches thick, kept down by ropes often of twisted straw, as shown, which are carried over the ridge of the roof and fastened to the ground with wooden pegs. Sometimes the whole thing is covered with a layer of earth. Straw ventilators should be left as shown. A shallow ditch should be dug around the store to carry off heavy rains. Light rains getting through the straw will do the roots more good than harm. The straw is to ward off the frost. Until severe frosts come, small heaps of the roots may be heaped up for immediate use in the field and covered with straw.

Of course, all have to be topped and tailed before storing. The leaves are of more value for manure than for feed. An old sickle with the point broken off makes a good tailing knife.

Except for use late in the spring when forage crops chanced to be late or poor, I have not found mangels desirable either for ewes or lambs, and so do not think it necessary to devote much space to them here. Their cultivation is much the same as that of the turnip, though they are better, on account of the large size to which they sometimes grow, if allowed from twelve to fifteen inches of space in the rows. Heavy dressings of farm-yard manure and five hundred pounds of common salt to the acre mixed in with it seem to be the method of fertilizing that suits them best. They improve by keeping, if properly stored, and for use in the spring are therefore superior to the turnip for cattle, for which they are greatly in favor on the continent of Europe.

Jno. Pickering Ross.

In our next issue a continuation of this discussion of sheep-feeds, covering the subject of forage crops, will complete Mr. Ross' series on sheep husbandry.



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Live Stock and Dairy

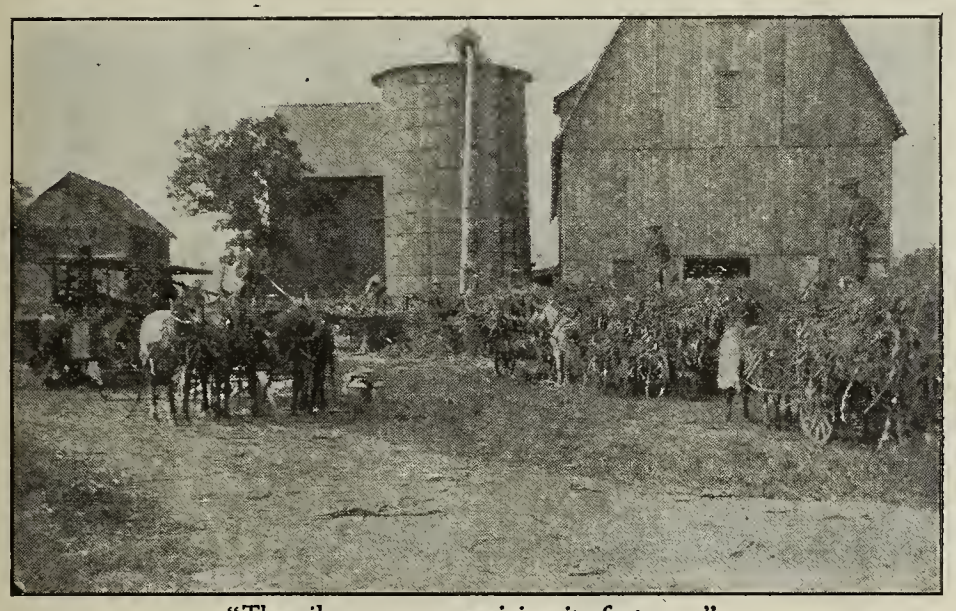
Silage Wins

THE accompanying picture affords some idea of the transformation that is being wrought in the big Elgin dairy district of Illinois.

Until within the last three or four years silage has been tabooed. Dairymen were not allowed to feed it to the cows under pain of having their contracts with the big milk-buying concerns annulled.

However, the dairymen kept on reading their farm papers and the bulletins of the experimental stations, and a few of them broke away from the embargo that had been laid on one of the most nutritious dairy rations of the modern day. The milk-buyers were told that the farmers were going to feed silage to their dairy stock, and if the contractors didn't want the milk, they needn't buy it at all; it would be distributed to consumers in the cities just the same.

The way that one dairyman followed another in building silos was after the manner of a flock of sheep following a bell-wether, they all went over the bars in a bunch. Dairymen on both sides of the Illinois-Wisconsin line gave more orders for the structures than the builders could take care of, one single contractor having more than thirty orders on his hands at the same time.



"The silo . . . receiving its first crop"

It is due to the milk-buyer to say that farmers have made substantial progress in putting up silage, it is more of a uniform grade and this is what the contractors have advised if silage was to be used at all, because in buying a composite product from a community of milk-producers who put up different grades of the feed, the undesirable was mixed with the good and had a bad effect on the milk.

The picture shows a scene of this fall in the barn-yard of Lusk Brothers, near Round Lake, Lake County, Illinois. The fodder is being hauled from the corn-harvester in the field by eight teams and is being run through the cutting-machine which is operated on the same plan as a threshing outfit. The machine has a capacity of one hundred tons of silage a day. The silo shown in the picture is new and is now receiving its first crop. It is eighteen feet in diameter and thirty feet high, resting on a solid concrete foundation. Its capacity is one hundred and seventy-five tons.

The barn also has just been completed. It is capable of holding one hundred and fifty tons of hay, is ninety-six feet long and thirty-four wide, resting on a granite foundation. The lower story furnishes stable room for sixty-five cows, the floor is concrete with a gutter behind the animals and a water-trough for running water in front of them.

One of the unusual features of this barn is the large water-tank constructed under the outside driveway. It is of solid concrete and is covered with an immense concrete slab over which teams drive in and out of the barn. The tank holds two hundred barrels of water and is supplied from a thirty-five-foot well pumped by a windmill. Both tank and silo are connected with the dairy floor, the silage is easily distributed, and water is kept flowing and of desirable temperature. The barn and the silo with the work of the men who built it cost between three thousand five hundred and four thousand dollars. J. L. GRAFF.

Stomach-Worms of Sheep

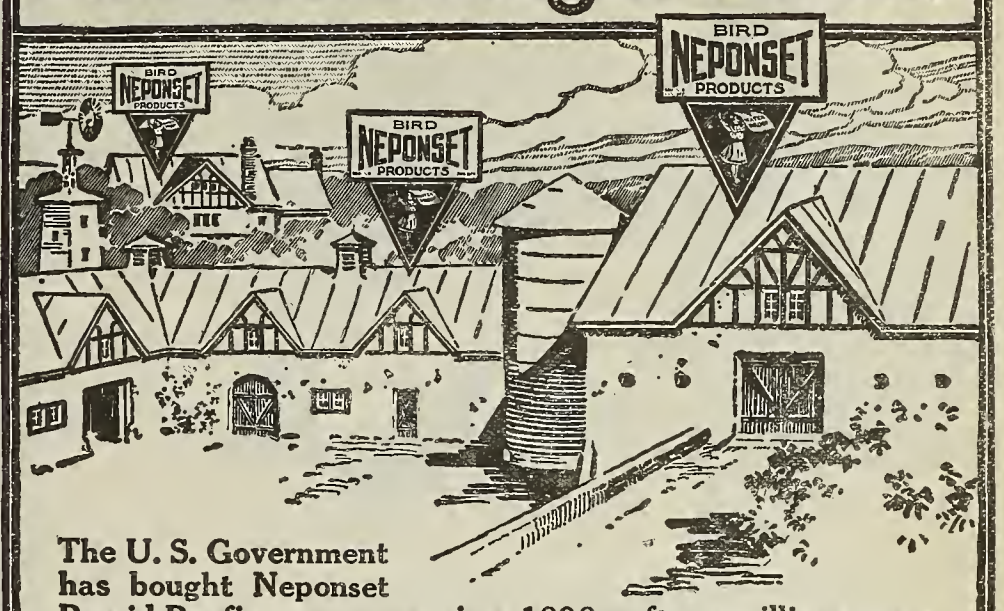
A FLOCK-MASTER in Ohio asks about a disease of his sheep. They run at the nose, legs bend under them, they cough, get poor and die. They sheared very light and the wool did not have the right color or life. From his description their pasturage and care seems all that need be desired.

There seems no question that there is a parasite at the bottom of the trouble. A post-mortem on one that is doomed to die will probably show that they are badly affected with worms of one or more species. Kill the sheep to be examined by bleeding and soon after it is dead open and examine the bronchial tubes for thread-like worms, then examine the intestines for lumps or nodules which are the homes for worms. Open the fourth compartment of the stomach and look for small worms about an inch in length and no larger than a fine thread. In case you find any of these worms, you can rest assured that all have more or less of them. Then get to work and dose every sheep with a dessertspoonful of gasolene mixed in three spoonfuls of pure raw linseed-oil and a half pint of milk. Give this after a sixteen-hour fast and repeat in three days. Prepare the following medicated salt and place where the flock can eat what they desire of it: Common salt, ten pounds, in which mix powdered charcoal, two pounds; powdered worm seed, one pound; powdered sulphate of iron, twelve ounces; sublimed sulphur, twelve ounces. Mix well together and give them no other salt. By doing this you will save some of them, but don't expect to save them all. C. D. SMEAD.

Attention to keeping the stable-bedding clean saves you lots of currying and at that the animals will have glossier and healthier skins.

With hogs dropping off in price, as they always do, and with the chill weather coming on, it will take more judicious care and feeding to make them pay.

Are You Going to Build?



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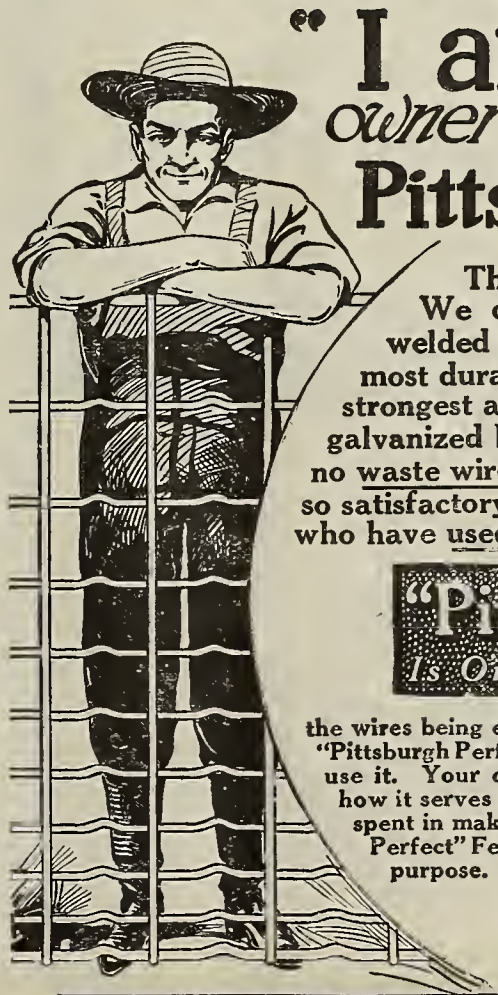

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Farm Notes

The Farm Homes Association

Some time ago the editorial columns of Farm and Fireside apprised our readers of the plans of the National Farm Homes Association, proposed by the governor and commissioner of immigration of Missouri. The idea was, you remember, to buy up lands at ten dollars an acre, cut them into groups of thirty-two forty-acre farms, put up fences and buildings and supply stock and tools, which would bring the total cost per farm up to twelve hundred dollars, payable in easy installments to the corporation backing the movement, these funds to be reinvested in new farms. All farm groups would be coöperative, agent of association to live on a central quarter-section place where all heavy machinery would be located, and to act as adviser, selling and shipping agent for the farm group.

The advance prospectus of the project estimates the "possibilities" of a forty-acre farm at $2,375 a year from crops as follows: Three acres of tomatoes, $150; one and one half acres of onions, $150; two acres of potatoes, $100; four acres of fruit, $400; one acre of small fruits and berries, $150; four acres of corn and cowpeas, $160; eight acres of alfalfa, $240; four acres of ensilage and late rye, $200; four acres of timber, $25; three and one half acres of miscellaneous garden, $200; four acres of clover, $100; cows, pigs, chickens, ducks, etc., $500. It is calculated that $1,375 will support the family over and above what they consume of farm products, and that the farmer will be able thus easily to meet his annual payment of one hundred and sixty dollars.

There is no doubt of the disinterestedness and sincerity of the men back of the plan. How about its practicability? This case is so typical of colonization schemes in general that we believe our readers will find a good deal of value in the following comments of practical farmers, called out by our editorial.

Mr. John Pickering Ross, with whom our readers are well acquainted, on account of his series of papers on sheep husbandry, writes: "While most heartily applauding the main idea of its promoters, I am unable to regard with favor either the manner in which the capital of twelve hundred dollars, proposed to be advanced to each forty-acre allotment, is to be expended or the system of cropping. The amount of working capital aside from that in permanent improvements is too small to enable a man, be he ever so thrifty and industrious, to make anything near the most of his forty acres. My experience, both here and in Europe, has been that insufficient capital is the cause of more farm failures than laziness, ignorance and all the unavoidable set-backs to which farming is at times subject, combined.

"The course of cropping proposed would necessitate the production of a vast amount of manure, unless the land is to become worthless to its occupier in about five years. Ten acres are to be in exhaustive garden crops, four acres in fruit and one acre in small fruits and berries demanding occasional manuring. This small farmer can spend no money in fertilizers and he must sell practically none of his ensilage, late rye, clover and alfalfa, but must feed them to stock, the manure from which will be needed by the vegetables, to say nothing of the corn and rye ground.

"When he has paid one hundred and fifty dollars for a fairly good team of horses and bought perhaps five dairy cows at thirty-five dollars and twenty-five ewes at, say, three dollars and fifty cents and three brood sows at twelve dollars and invested perhaps ten dollars in poultry, he will already have exceeded his stock and teams allowance by over one hundred dollars and, unless he has money of his own, which I presume is supposed to be the exception, he is already feeling the grind of want of capital. I think, too, that it is a mistake for the prospectus to suggest so large a production as $2,375 to men who are starting in so small a way or, on the other hand, to suggest so large an amount as $1,375 for the support of the family, who must be willing to get their main support direct from their forty acres. To insure success the association must be careful to avoid statements which practical men will know to be untenable."

Mr. J. J. Kelly, writing from Missouri, says: "As far as this state is concerned there are few sections where you can get forty acres of all tillable land at ten dollars an acre. The only places where the land can all be cultivated are in the prairie sections, the creek and river bottoms and in the southeastern part of the state. The prairie land rarely sells for less than forty dollars an acre, from that to one hundred dollars, and good bottom land will average about the same. In the southeast a good bit of the land is swampy and might, perhaps, be bought for ten dollars an acre, but drained land cleared and in cultivation there sells high.

"To get the prices figured on in the prospectus one would have to be near cities where land is high priced. In the timbered and hilly portion of the state, where the ten-dollar land abounds, you can not count on getting more than twenty acres fit to cultivate in each forty. The rest would be so rocky and brushy it would only be fit for pasture, and on this new land it takes years to get tame grasses to grow."

Says F. M. Lutts, Ohio: "In addition to the 'possibilities' prospectus, the National Farm Homes Association should issue a 'probabilities' prospectus, also; because, probably, it is impossible to purchase a tract of land so that each of the thirty-two farms would have four acres of timber each and probably it would be impossible to turn these farms over to the farmers with all the crops mentioned growing or even with the land in a suitable condition for planting the first season, at the price named. Unless this is done, it will be impossible for the farmer to have a crop of small fruits, fall-sown rye or clover for hay the first year, alfalfa the second year, while peaches would only begin to bear the third year, cherries, pears, plums and apples later."

Lacking a detailed knowledge of the basis on which the proposed association worked out its figures, we agree with our four correspondents that the estimate needs revision. We believe that if the plan comes to realization, such a revision is likely to be made. The prospectus we quoted was an initial and tentative one. The association has essential merit and it does not, in the least, necessarily stand or fall on the basis of its advance figures.

Editor.

The Farmer as a Business Man

[CONTINUED FROM PAGE 5]

their profitable operation is really possible, these small factories should spring up by hundreds.

It should be noted here that large numbers of successful organizations are now in existence. Once started and nursed through the infant period, they thrive. Fifteen years ago the citrus fruit industry of California was demoralized. Now, the California Fruit-Growers' Exchange, an organization of the fruit-producers, does a business of about twenty million dollars a year. There are some eighty local societies banded together to successfully market the crop. The Colorado fruit-growers' associations do a business of about a million dollars a year. There are over thirty societies in that state—the one at Grand Junction being the best known and a thorough success for nearly twenty years. The Hood River, Oregon, Fruit-Growers' Union has been and is another illustration of success. Then there are the Florida Citrus Fruit-Growers' Association and the Georgia Peach-Growers' Association—the Fruit Exchange. In small fruits mention might be made of the Wathena Fruit-Growers' Association, which handles tens of thousands of cases of raspberries, blackberries, etc.

In the vegetables we might refer to the Peninsular Produce Exchange of the East Shore of Virginia, which has agents at some twenty-five shipping stations, a general manager, and does a two-million-dollar business in potatoes alone. Then there is the Southern Texas Truck-Growers' Association, extending from Laredo to Cotulla and farther, and with agencies in the chief cities of the United States. It is a good illustration of a large number of farmers producing a special crop for a market a long distance away. Compared to it we have the newer movement in the vicinity of Duluth, Minnesota, where some fifteen or twenty local farm clubs within fifty miles of Duluth, with a central agency, are supplying that city with vegetables, etc.

Do You Get What Your Milk is Worth?

The farmers of the United States produce each year hundreds of millions of gallons of milk. Some of this is sold as milk; some is sold as cream or butter-fat (the skim-milk being used or wasted at home); some is sold as butter or cheese. Only a very small percentage of the farmers who are interested in this field are organized. Are you a member of an effective society? Does your society look into the reputation of the new bulls which come into the community? Does it own three or four of the best bulls in the land—two young ones purchased at a very low price, growing to maturity, a mature one brought up and acclimatized in the neighborhood, and one ready to be sold at the coming fair at four times the price paid for him, because, forsooth, he has been tried and has not been found wanting? If you do not belong to a good society, it is time to act, unless you have such a large herd that you can afford to do all of this alone.

Do you have a cow-testing society? Here, again, is a place to start. Weed out the poor cows or bring them up to standard. Every farmer should be in such a society. The cost should not exceed five dollars a year and would pay many hundred per cent. on the investment.

Do you have a coöperative milk-sellers' association or coöperative creamery or cheese factory? Why not? You say that they are not a success! I say that it is not true. They are a success except (1) where too many are placed so close together that there is not a sufficient supply of milk for all, when some must close; or (2) when a factory is started in a new country and there are not yet enough cows; or (3) when a centralizer by giving higher prices for a short time "bribes" a few of the short-sighted members, who thus bring about the downfall of their own society; or (4) where incompetent management is to blame. These forces will bring ruin in private as well as coöperative business. Stores, factories and other business enterprises "go to the wall" daily in our cities, yet we hear little about it. But when a coöperative organization fails the fact is heralded far and wide. This is largely true because other business men control the press, the coöperators do not advertise, and private industry looks askance at successful coöperation.

But do not let that frighten you. Do you not know that in Minnesota alone there are nearly six hundred successful coöperative creameries aside from other forms of coöperation among the dairymen of the state? A letter to the state dairy commission or the agricultural college would bring details. Iowa and Wisconsin have already started the movement and they have over six hundred coöperative creameries. Farmers in other countries recognize the importance of this. Thirty years ago there was not a coöperative dairy in Denmark. To-day, 158,000 farmers belong to 1,087 such dairies. They ship nearly a million dollars' worth of butter to England each week.

When the cream or butter-fat is used for butter in these creameries, the skim-milk should be carefully used. Do you not know that in little Denmark there are thirty-four coöperative slaughter houses to handle the hogs produced by the farmers referred to above?

I do not advise the farmers to start into this last line without the very greatest deliberation and the most searching investigation and a solid organization, which can come only with years of experience. But the producers of pigs should none the less organize, as should the producers of other kinds of meat (especially those who are not now producing car-load lots) to market their products.

Cooperation in Selling Heavy Staples

In the grain, cotton and tobacco sections a somewhat different problem presents itself. First, it should be held in mind that if there is no satisfactory demand for these products, they will keep. They come in the general class of non-perishables. If the price offered—the going market price—is not sufficient to pay the cost of production and leave a fair margin of profit, the farmer should not sell. These things must be stored some place, and why not on the farm or at a local warehouse?

The one great difficulty is that the farmer probably needs the money. Here, then, some action is necessary. Should the farmer sell at a sacrifice? My answer is "No." And he should not deliver his goods over to the trade. He should hold them, and if necessary borrow money. Every farming community should have a warehouse or elevator in which a large share of the crop could be stored. This, supplemented by the farmer's barns, should be sufficient to keep the surplus until it is demanded by the market at remunerative rates.

The elevator movement is now getting well started. Whereas the farmers had no more than a few score of coöperative elevators in all the grain districts in 1904, they had about one thousand by 1907, and now have probably sixteen hundred, with a membership of over one hundred and ninety thousand. One of the best coöperative journals in the country, published in Chicago, is entirely devoted to their interests. The American Society of Equity is commencing to work in the same direction, and will probably help the work of organization and consolidation, if it is able to keep out of politics. In the land of cotton the planters now own probably twelve hundred warehouses and several gins. In Texas alone there are more than three hundred of these owned by the farmers, and in Mississippi the locals are banded together to form a state holding company, or general agency, in order to expedite selling, borrowing, etc. Most of these warehouses and gins are owned by local unions which are directly connected with the National Farmers' Educational and Coöperative Union.

Farmers should own their own cotton-gins, rice-hullers and grain-cleaning plants. But it is not necessary for them to go beyond that at this time—to the flour mills, cotton factories, meat-packing plants or other manufacturing enterprises. Later, they may find it advantageous to invest their savings in these factories, as do the farmers of Germany, where the sugar-beet producers have hundreds of thousands of dollars invested in the sugar refineries.

Farmers' telephone companies should receive mention, as should also the farmers' mutual insurance systems spreading rapidly over the country; but the limits of this article will not permit any more than this mention.

It should constantly be kept in mind that a successful local organization is a good thing, because it brings the members greater profits, because it is of great social value, because of its educational value and because it is a clearing house for progressive ideas concerning farming in general. But a successful group of coöperative locals is a better thing, because it brings still greater profit to each local. It balances or distributes local losses and, properly managed, it brings better goods to the consumer at a lower price by eliminating extra cost of handling and loss of goods.

It should also be remembered that: A local can not have the greatest success unless (1) all members agree to patronize it and are forced to live up to the agreement or pay a fine and (2) unless all members work for the success of the society, which means for themselves.

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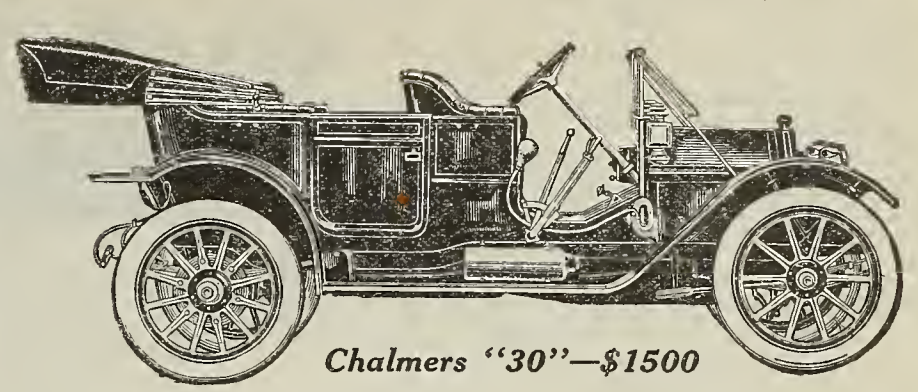

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Farm and Fireside, Springfield, Ohio, Nov. 10, 1910.

Every farmer will agree to these facts without hesitation, but, **do not regard them in a general way, as applying to everyone except you.** Consider just how much service you, yourself, would get with an automobile. Then consider what car will give you the most service for the money invested. In general, it is a pretty safe statement that every car is worth just about the price asked for it.

The car for a few hundred dollars is only worth a few hundred dollars. On the other hand, in the luxury priced car you are paying for luxuries. From actual showing, the medium priced cars have proved themselves to be the greatest value from a strictly service standpoint.

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In beauty of line and finish, in easy riding qualities and comfort, it is the equal of any car at any price.

Do not make a decision until you have at least seen the Chalmers "30." If you do not know the name of the nearest Chalmers dealer write us, and we will let you know where he is.

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Oleomargarine and Cotton-Growing

IN THE case of Mr. Lever of South Carolina, our Farmers' Lobby has called attention to a thing quite common among public men of the South—the championship of the cause of the oleomargarine manufacturers in the name of the cotton-growers. Cotton-seed oil is used in the making of certain kinds of oleomargarine. These public men of the South are loudly demanding the repeal of the ten-cent tax on colored oleo under the claim that the interests of the Southern farmer in cotton-seed oil are greater than in dairying. Perhaps it is never put quite so bluntly, but that is the claim.

A circular issued by the National Dairy Union throws much light on the question as to where the real interests of the Southern farmer lie. "A careful estimate," it says, "compiled from government reports shows that through the sale of cotton-seed oil which was used in the manufacture of oleomargarine last year, the cotton-growers of the South actually received one and one half cents for every acre planted to cotton!"

Such a demand for oil is of absolutely no consequence to the cotton-planter. Cotton-seed oil has a demand as an oil and with other oils, for all the multifarious uses to which vegetable oils are put and quite aside from the oleo trade. The oleo trade might cease to-day and the demand for cotton-seed oil would not be seriously affected. On the other hand, the butter business in the South is great and increasing. It holds out great promise for cotton-growers in the enrichment of their fields and the making of two bales from land which now produces but half a bale. Nowhere is the prospect more rosy for dairying than in Dixie. We will soon begin the publication of a series of letters from the Cross & Co., Dairy farm of Baldwin County, Alabama, where a successful dairy is being carried on in that sandy country near the gulf, where pasture grasses have never been a success. Our readers, North and South, will be interested in knowing how dairying succeeds there without pasture. Mr. H. B. Gurler, one of America's greatest dairymen, is, we believe, making more money in butter and milk in Mississippi than he ever did in Illinois—but he is in a limestone and grass region. Quoting the circular again: "For every dollar's worth of cotton-seed oil used last year in making oleomargarine one hundred and seven dollars' worth of butter was produced in those same cotton states."

Things are taxed for two reasons—to raise revenue and to abolish undesirable things. Frauds are undesirable things. Colored oleomargarine is made to be sold as butter, and the taxing of it out of existence as a fraud is justifiable on the same grounds that make it proper to tax sheep-killing dogs and narrow-tired vehicles that ruin the roads. Southern farmers should not allow themselves to be misrepresented.

* * *

If we could get hold of some sort of automatic corn that would harvest and put itself all nicely shucked in the crib, some of us would enjoy big crops better.

Speaking of Run-Down Lands

A GOOD deal is said and written about "decreasing fertility," "run-down" and "run-out" farms, and "old fields" which will not grow crops any more. Wouldn't it be valuable to us all if we could determine exactly what is lacking in these fields? We know that the mineral plant-foods most apt to be lacking are nitrogen, phosphorus and potash. A chemical analysis fails to show what is needed, and the only way to determine is to ask the soil, either by means of test plots or test pots. Another element in the good soil is humus—that black residue of plant decay that gives character to all good soil. Humus is lacking in every old, run-out, run-down field the writer ever saw. Is there a reader of this paper who knows of a farm once productive, but now sterile, which still has plenty of humus? In other words, did you ever see a soil fail until its humus failed? If so, let us hear from you. The writer does not deny that cases may exist where a once fertile soil has ceased to produce, with plenty of humus left in the soil, but he never has seen such a case. It is in the hope of having his attention called to one that this is written.

The most precious toll which greed exacts is the finer elements of one's own self.

A good backbone is one which has spring enough in it to straighten up again when it is crushed down.

A farm wood-shed is as important as any other convenience on the place—yet often the very last to be thought of.

A heavy dragging gate in daily use is the occasion of great loss of energy and is a pretty good index to the character of the owner.

Are Waterways Free?

READERS of this page have long been advised of the fact that our formerly free water transportation from the head of the lakes to Buffalo—and for that matter, down the Erie Canal to tide water—has, in recent years, been annexed by the railways. This state of things has forced the Chicago Board of Trade to file a complaint against the Pennsylvania Railway, the Baltimore and Ohio, and the New York Central, all of which operate lines from Chicago to New York. The complaint states that since 1906 the rates from Buffalo to New York on grain transferred from lake boats has been increased to such an extent that it is cheaper to ship all the way by rail than to use the water, and at the same time, that the all-rail route has become extortionately high. "Substantially all means of all-rail transportation from Chicago to New York," says the complaint, "and other Atlantic seaboard points, and also all parallel and competing through lines of transportation via the great lakes from Chicago and other lake points to Buffalo and from Buffalo to New York and other Atlantic seaboard points, are owned and controlled by the said defendant common carriers."

Have you noticed any excessive difference between the price of grain at your market town and in New York? Well, the reason is that the waterways your grain should follow in shipment are no longer free. They are controlled by the railways. We have been taxed to the extent of something like $100,000,000 for the money to deepen the harbors and channels of the Lakes, and now these very harbors and channels are controlled by the railways.

Grain has been the last commodity to feel this control, because the great grain companies have owned, and still own, their own water terminals at their elevators. Other freight, which has had to reach the ships over other docks, has long been virtually shut off from the lakes.

The government may do something to mitigate the situation and bring relief to the farmers and shippers of the lake region and the West, but the cure can never be complete until we have free and publicly owned wharves and docks at the great lake ports of Chicago, Milwaukee, Duluth and several other cities. Free and publicly owned wharves and docks should be required by the government as a condition precedent to expending money for improvements. Buffalo has one of the most capacious harbors on the lakes, almost every inch of which is monopolized by railways hostile to the use of it.

Free harbors on the lakes and rivers and a toll-free Panama Canal are basic requirements for just conditions to the producers and consumers who pay the taxes. The farmers of the nation should take these things seriously to heart. Congress should be filled with a wholesome fear of an aroused public sentiment concerning the intolerable grievance of unfree waterways.

* * *

It doesn't do two hearts much good to beat as one if the two heads do not think that way.

Apples that won't keep will make cider; cider that won't keep will make vinegar—and vinegar will keep.

Bring up your boys and girls to be independent—not impertinent and disrespectful of the opinion of others, but resourceful and ready to act for themselves. This is better than to put a fortune they have not earned into their pockets.

Prize for Farm Aëroplane

MR. ED. HOWE, editor of the *Atchison Globe*, offers a prize of one million dollars for the first aëroplane flight from London to New York. He says he isn't going to allow himself to be outdone in generosity by W. R. Hearst. Mr. Howe has at present nothing that even distantly resembles a million dollars, but he hopes to be able to save it out of his earnings by the time the flight is made.

Nobody has as yet done anything in the way of developing a practical farm aëroplane, and it seems to be up to FARM AND FIRESIDE. We therefore offer a prize of a ton of radium to the first inventor exhibiting at our office at Springfield, Ohio, such a machine. It must be small enough to fit comfortably into the wagon-shed when not in use and sufficiently powerful to draw an ordinary fourteen-inch plow as fast as a Percheron horse can walk. The uses of such a tool will be manifold. It will enable one to mingle pleasure with the task of hunting for lost calves. Its utility in stretching wire fencing is obvious. In trimming back large trees it will be invaluable. The pulling of fence-posts and stumps will, when this machine is in use, be simply pie. The prize we offer seems quite large enough to stimulate the greatest inventive effort, when one remembers that radium is now worth about $500,000 an ounce. We are not in the least concerned by the fact that there is only about an ounce of this precious substance in existence, so far as the market goes. Inventors are invited to attend to their own business of inventing, and leave the radium to us.

* * *

The trouble with those fellows who do so much wise talking around the village loafing-places is that their muscles are disconnected with their brains.

Ever thought of oiling machinery as you put it away for the winter? Think of how it will prevent the gearings, chains and bearings from rusting and how smoothly they will run next season.

Have a system in shedding your machinery. The implements that will be needed first next spring, should be next to the door, so they will be no trouble to get out in their order, as needed.

It is the younger nations and states that we are often indebted for the most progressive, useful laws. A law was enacted in North Dakota about two years ago giving to counties the right to bond themselves for the purpose of purchasing seeds, whenever necessity arises. Each purchaser of seed at the actual cost price must give the county a first lien on the crop raised.

Now for Choleraless Hogs

A TEST of the hog cholera serum has just been concluded at South Omaha which seems to prove that the swine-grower who loses hogs with this scourge has good reason to blame himself—or his state government. Himself if his state provides the serum; his state if it doesn't.

Thirty pigs weighing from forty to sixty pounds each were used in the test. Four were inoculated with cholera by the injection of blood from the veins of a sick hog and placed in a pen by themselves. In five days all four were down with the disease. Eighteen of the pigs were treated with the serum and, with the eight untreated animals, were turned in with the sick shoats to live or die.

The results are of great significance to all of us. The four that had cholera injected into their systems all died. The eight untreated ones all took the disease and presumably all died, although the records available to the writer do not state. The eighteen serum-treated pigs, although they were allowed to run with the diseased ones, remained perfectly well and were finally disposed of as healthy hogs. The experiment was witnessed by representatives of the Nebraska Experiment Station and the Nebraska Swine Breeders' Association and of several agricultural papers.

State funds should be appropriated in all states for the manufacture and distribution of this serum. The value of it is no longer open to question.

The FARMERS' LOBBY.

By Judson C. Welliver

THIS country is just chuck full of people who stand around bemoaning the fact that the federal government is constantly intruding itself into the "domain of the states," whatever that may mean, and yet who, whenever there is some serious governmental or administrative business to be attended to, instantly appeal to Washington to do it.

Whereof I was reminded the other day when I journeyed down to the Department of Agriculture to talk with Secretary Wilson about some recent activities of his department. The secretary is a good deal of a Federalist himself, and he is one of the men who have done most to popularize the federal idea. At the same time, he has an interesting theory that the very things which his department is constantly doing, which infringe upon the prerogatives of the state, are, in fact, educating the states to an understanding of their proper duties and obligations to their people, which before many years will lead them to undertake a vast deal of work for which they now rely upon the national government.

State Rights a Fair-Weather Doctrine

A good old-fashioned state rights advocate couldn't help being disheartened if he would observe the enthusiastic willingness of the states to let Uncle Sam spend his money doing their work. I remember a few years ago when the gulf states were threatened with an epidemic of yellow fever and a good many of their people got panicky about the situation, Congress suddenly found itself swamped with piteous appeals from states-rights governors and legislatures, mayors and councilmen, to move in and take charge of the whole quarantine situation. John Sharp Williams of Mississippi, than whom no statesman of our time can be more eloquent in deprecating the tendency of the national government to overshadow the states and take all their powers away from them, took the lead in pushing legislation to give the federal quarantine authorities full power—and, don't overlook this, too, ample appropriation—to cope with the situation and to stamp out the threatening epidemic. Mr. Williams didn't like the situation a little bit; but as leader of the minority, he had been receiving telegrams by the bushel from all over the South, appealing to him for aid in meeting the emergency; and as between a condition of epidemic and a theory of the constitution, Mr. Williams admitted that he was strong for meeting the condition.

That's the way it is pretty much all the time. When it comes to providing money to protect Louisiana against yellow fever or Pennsylvania against the foot and mouth disease, why, Louisiana and Pennsylvania are very apt to waive any scruples they may have about federal interference.

These fleeting reflections, apropos of what Secretary Wilson was telling me about the enforcement of the twenty-eight-hour law regarding transportation of live stock. As originally passed, the twenty-eight-hour law flatly prohibited live stock being kept continuously in transit for more than twenty-eight hours without feed, water and unloading. There were excellent reasons for passing such a law, most of them of a humanitarian character. But as soon as the law was passed making an iron-clad limit it was discovered that in a large proportion of cases the new regulations made conditions even worse than before. It was not always possible to provide the facilities for complying with the law, without enforcing a long delay which frequently involved loss to the carrier and to the owner of the stock alike.

Practical Humanitarianism

Having the problem of this new regulation on its hands the Department of Agriculture proceeded to a careful study of all the conditions surrounding the shipment and handling of stock. Secretary Wilson tells me that the experts on the subject are now pretty well agreed that the one thing which stock in transit most needs is the opportunity to take rest. Feed in transit is very seldom necessary. Water is sometimes needed, although stock in transit sustains very long periods without water and without suffering. There used to be a general belief among stock shippers that if it were not provided the stock would suffer a considerable shrinkage in weight. To the contrary, the authorities are now pretty well agreed that this shrinkage does not affect the meat, weight or value of the animals and that as a rule no final loss is incurred if they are deprived of water for a considerable period. The animals, however, become very tired of standing in moving cars for long periods, and this can only be remedied by the strict enforcement of regulations limiting the number of animals to the car so that there will be room for them to lie down.

When the original twenty-eight-hour law proved unsatisfactory to nearly everybody concerned, it was amended by a provision that with the shipper's consent, or at his request, the stock might be kept continuously in transit, without feed, water or unloading, for thirty-six hours. This regulation has very much improved conditions, because in consideration of this extension both shippers and railroads have aimed to avoid overcrowding cars. Consequently, the inspectors find that stock brought into Jersey City, for example, destined to the New York market, from points in the West is generally lying down in the cars when the destination is reached, and is turned out of them in very satisfactory condition. The opportunity to rest has proved, in experience, very much more important than feeding or water.

However, stock destined for New York or Boston and coming from points west of the Mississippi River, is usually unloaded at the Mississippi River, at Chicago, at East Liberty, near Pittsburg, and thence rushed through to the destination without further stoppage.

Conditions of stock in transit are constantly being improved. At least two important railroad systems in the live-stock country, the Chicago and Northwestern and the Chicago, Milwaukee and St. Paul, are now operating stock cars in which the feed is placed overhead, where the animals can reach it, and it is not difficult to provide each car with enough to insure the animals against hunger. Buckets fastened to the sides of the cars are so arranged that they can be filled very quickly at stopping-places with water. When stock in these cars is so loaded that there is room for the animals to lie down, there is no possible reason for complaint on humanitarian grounds.

Uncle Sam Gets Results

"The need for the law," said Secretary Wilson, "is to provide against people who have neither heart nor conscience and who are perfectly willing to load a car to its capacity and then run it straight through from Chicago to New York, no matter how long it takes, without any consideration for the animals. Our experience shows that the meat of the stock will not shrink in a week of travel, though the paunch will."

It was at this point in his lecture that Secretary Wilson interjected some thoughts on the everlasting question of state as against federal jurisdiction over the facilities of commerce. In the earlier efforts to enforce this law it was constantly found that the railroads were not equipped with proper stock-yards at convenient locations, in which animals could be unloaded. Frequently the stock-yards at small stations were deep in mud and utterly without facilities for watering or feeding. The consequence in a large proportion of cases was that to stop and unload the stock gave it absolutely no benefit, but merely served to lengthen the trip and by so much to increase its discomforts.

The first effort was, of course, to induce the railroads to provide proper stock-pens at convenient locations. But the federal government found itself without authority over stock-yards because these fell within the jurisdiction of the state, and the states, as is so often the case, were not particularly excited about the necessity of coöperating and compelling the railroads to provide proper facilities. So the burden is finally shifted to the broad shoulders of the federal authorities, and they must find means to discharge not only their own obligations in the premises, but also that which under a strict construction would probably be held to belong to the individual states.

Sidestepping Father Time

Secretary Wilson, as usual, was one of the first cabinet officers to get back to his desk after his summer vacation. On August 16th, the secretary was seventy-five years old. He has been Secretary of Agriculture since March 4, 1897, nearly fourteen years. From the beginnings of the government, no man has been a cabinet officer for so long a time. There is every indication, according to the present political gossip in Washington, that Mr. Wilson will remain in the cabinet to the end of the Taft administration, which would make his service cover just sixteen years. I suppose that without question he spends more hours per year at his desk than any other man in the presidential household. The fountain of perpetual youth, which Ponce de Leon didn't find in Florida, Secretary Wilson appears to have found in Washington. He was past sixty when he was summoned to the McKinley cabinet. Most men, it may be added, if they had had such a full and varied experience as that of James Wilson prior to his entrance into the McKinley cabinet, would have been well pleased with their share of service and distinction. It is rather a remarkable thing, this of a man making his real career after he had himself come to feel that his life work was practically rounded out. To contemplate what James Wilson has done for himself and for his country since he was sixty years old is right rough on the theories of our old friend Doctor Osler; but it certainly is cheering to those of us who are beginning to wonder whether the good doctor's chloroform would be very disagreeable to take.

An International Leader

Everybody knows that under Secretary Wilson the Department of Agriculture has been one of the greatest establishments, probably the greatest, in the world for the promotion of practical, scientific research. It has done for the agriculture of the whole world, not merely for that of the United States, the inestimable service of convincing agriculturists everywhere that the most important utensil that can be used in the operations of farming is the brain. Farming has been raised to a new plane of self-respect and popular appreciation.

I recollect very well a summer's afternoon several years ago when I was riding on a British railway train and scraped up a compartment acquaintance with an English gentleman who discovered, as soon as he heard my accent, that I was an American. He promptly demanded to know if I chanced ever to have met our Secretary of Agriculture, Mr. James Wilson. With a touch of pride, in view of the fact that my British friend seemed to think the secretary was the only real important citizen we had in this country, I confessed to having known the secretary nearly all my life.

Then my English friend told his story. Several years previously he had been attracted to the bulletins published by the United States Department of Agriculture. Through them, he learned the possibilities of alfalfa and afterward of soil inoculation. He tried alfalfa, and it was a great success. Then he got the idea that he wanted to try the inoculation experiment, and he wrote to the Secretary of Agriculture at Washington, inclosing a one-pound note and asking for a sample of the culture. He expected to get a few ounces of the bacteria and was quite prepared to get nothing at all. What was his surprise, therefore, to receive by mail a huge sack of the culture and at the same time a polite letter from Secretary Wilson, returning his one-pound note, thanking him for his interest in the work of the department and expressing the hope that he would report to the department on the success of his experiment!

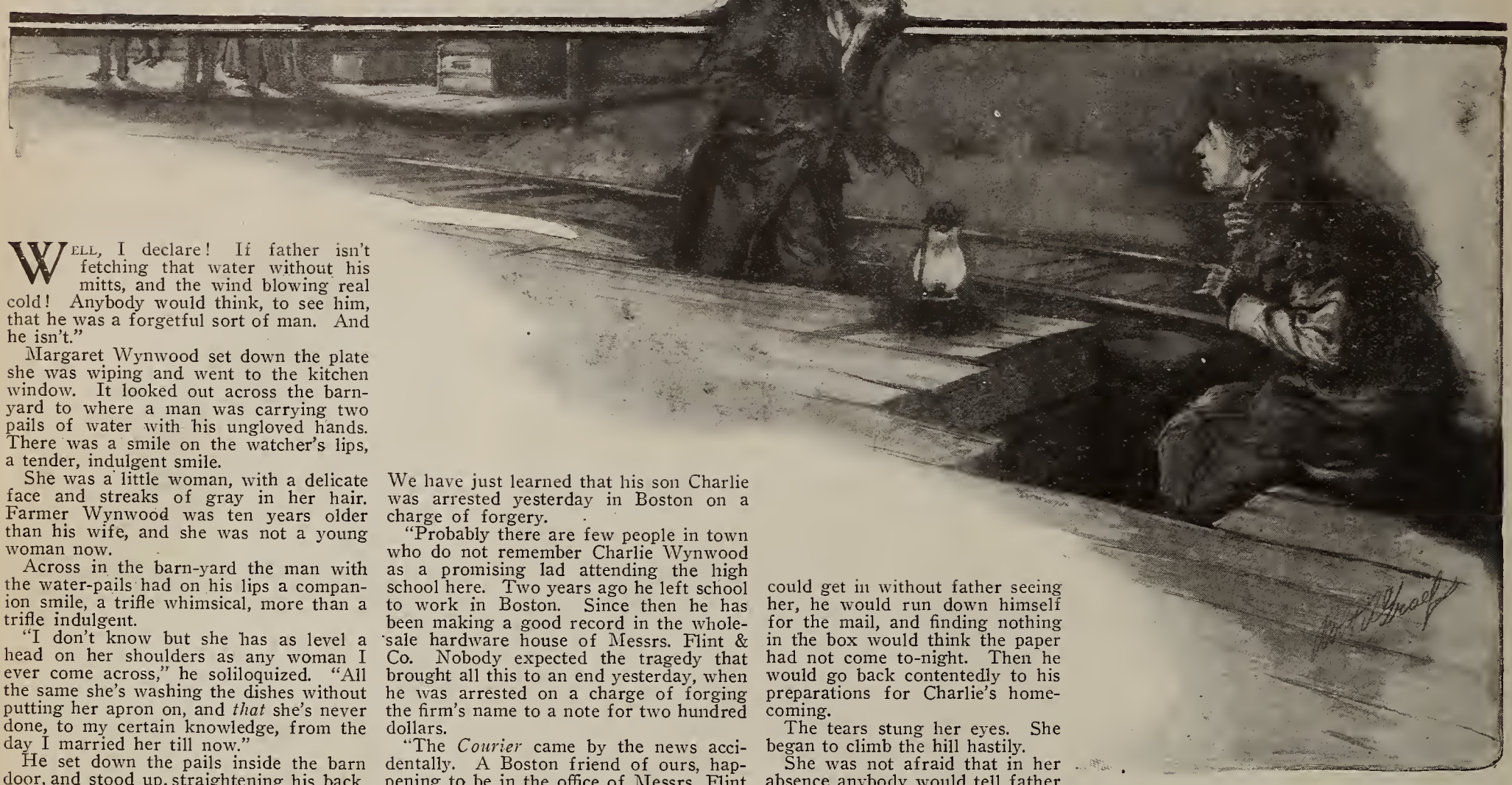
My British friend wound up by telling me all about his various experiments on his extensive farm, with the scientific methods developed by the American Department of Agriculture, and seriously wanted to know if I didn't believe some sort of international coöperation couldn't be devised by which the United States agricultural service would establish and supervise experiment stations, laboratories, etc., throughout Great Britain. I was disposed not to take the idea very seriously. My English friend, however, protested that under Secretary Wilson the United States was gathering up the agricultural experience, the useful plants, animals and scientific knowledge of the entire world and establishing a sort of trust in high-class agricultural knowledge and methods, all for the benefit of the United States! He protested that it wasn't fair and declared that he had talked to a good many people in his county about the matter, and that on the strength of the propaganda he was thinking seriously of running for Parliament!

The truth is that our agricultural and scientific work, as conducted under the Wilson régime, has attracted the attention of all the progressive nations of the world, and that in some ways it is even more appreciated abroad than it is at home. Several of the South American countries are reported to be organizing similar departments on the same lines as that of the United States, and some of them are already doing excellent work. Our farmers have reason to be proud of their department in its capacity of international pace-setter.

OFF THE TRACK AT HILTON

A Thanksgiving Story

By Emma Rayner



WELL, I declare! If father isn't fetching that water without his mitts, and the wind blowing real cold! Anybody would think, to see him, that he was a forgetful sort of man. And he isn't."

Margaret Wynwood set down the plate she was wiping and went to the kitchen window. It looked out across the barn-yard to where a man was carrying two pails of water with his ungloved hands. There was a smile on the watcher's lips, a tender, indulgent smile.

She was a little woman, with a delicate face and streaks of gray in her hair. Farmer Wynwood was ten years older than his wife, and she was not a young woman now.

Across in the barn-yard the man with the water-pails had on his lips a companion smile, a trifle whimsical, more than a trifle indulgent.

"I don't know but she has as level a head on her shoulders as any woman I ever come across," he soliloquized. "All the same she's washing the dishes without putting her apron on, and *that* she's never done, to my certain knowledge, from the day I married her till now."

He set down the pails inside the barn door, and stood up, straightening his back.

"We're worse than a hen with one chick," he chuckled, "for we have only one between the pair of us. All the same, there isn't another in the world like him. It don't seem but yesterday he was a little chap climbing up the hay-mow there, and now he's climbing up the road to success in the city. For the life of me I can't realize he's 'most a man. I wonder whether he'll be home to-morrow, after all. Likely there'll be a letter to tell us this afternoon. It don't want but a few minutes to time for the stage to be along. I'll run and have a look in the box when I get through feeding the horses."

His intended trip, however, was destined to be forestalled. There was a little woman who was as eager for a letter as he was. It chanced that she finished her dish-washing before he did his feeding. Then she wrapped herself in a shawl and turned out into the chill afternoon air. Her destination was a primitive-looking box fastened on a pole at the junction of this mountain road with the highway.

The love light was bright in Margaret Wynwood's eyes as she went down the road. It wanted but two days to Thanksgiving, and Thanksgiving would bring Charlie home. Indeed, he had held out hope of coming on the morrow. Verification of this hope was what she sought in the mail-box this afternoon.

As she neared the stage road the wind met her with a shriek. She drew her shawl closer. There was warmth enough in her heart to withstand more than the onslaught of a November blast. A flutter of expectancy made her hand shake as she lifted the lid of the primitive letter-box. A moment more and she was fighting with the dull pain of disappointment. There was no letter, nothing but the weekly local newspaper.

She picked it up mechanically and let the lid drop. She had felt so sure of a letter from Charlie. The afternoon had grown suddenly cold. She had called it simply blustrous as she came down.

She did not consciously glance at the paper. For the moment she felt no interest in it. Because her hands were cold she made a movement to put them and the folded paper under her shawl. As she did so the sun, gleaming from behind a cloud, fell aslant upon a couple of lines of printing. Margaret's hand was arrested. The expression of her face changed from dull disappointment through the phases of surprise, indignation, fear and hot anger, to a horrified incredulity. She turned the paper over and read the paragraph through.

It was impossible! Charlie, her Charlie! The thing was ridiculous.

And yet there it was, in plain type, with the editor's comments and sufficient detail to give it reality. There is something convincing in a printed statement, however much one may be disinclined to believe its import.

The words stared at her mercilessly in the slanting sunlight.

"We deeply sympathize with our old friend Elijah Wynwood in the trouble that has befallen him this Thanksgiving. We have just learned that his son Charlie was arrested yesterday in Boston on a charge of forgery.

"Probably there are few people in town who do not remember Charlie Wynwood as a promising lad attending the high school here. Two years ago he left school to work in Boston. Since then he has been making a good record in the wholesale hardware house of Messrs. Flint & Co. Nobody expected the tragedy that brought all this to an end yesterday, when he was arrested on a charge of forging the firm's name to a note for two hundred dollars.

"The *Courier* came by the news accidentally. A Boston friend of ours, happening to be in the office of Messrs. Flint & Co. at the time of the arrest, heard that the young man was from Hilton. His thoughts at once turned to the *Hilton Courier,* and judging that the news would be of interest to us, he wired it in time to reach us just as we go to press.

"Acquaintances of young Wynwood allege that he has been spending money freely of late and that he threw out hints of a source of income more elastic than his salary as a clerk for Messrs. Flint & Co.

"We are sorry for Farmer Wynwood and his wife. We do not know of a straighter man in town than Elijah Wynwood."

The last words stung Margaret to anger. A straight man! The appreciation was meant in all kindness, but she resented it—for Charlie's sake. It was putting Elijah, the father, apart in the minds of men from Charlie, the son.

She was thrilling all over with indignant protest and denial. What did it mean? It was impossible, monstrous. The editor did not know what he was talking about. Charlie was coming home—to-morrow, perhaps. Why, she had been making Thanksgiving dainties all day, ready for his coming, and father had been just as busy getting everything spick and span in barn and stables. Charlie a prisoner—not free to come home! It was ridiculous.

But through all her hot anger the printed words stared her in the face, clear, definite and unyielding. The man who sent in that item of news had no interest in falsifying the account. He told just what he saw and he was present when Charlie was arrested.

Arrested! The blood rushed to her face hot enough to bring the water into her eyes.

"Father must not know—not till it is all over and he is cleared," she whispered. "Why, it would break his heart. He was always so proud of Charlie."

She broke off and stood trembling, realizing that she had put the thought in the past tense, as if the time for pride were over.

"Bless him," she said, and there was a sob in her throat, "we are both proud of him and always shall be, though they have dared to bring him to shame."

She stood by the mail-box forgetful of time, the wind swirling round her.

"No, father must not know," she repeated. "He is not as young as he was, and he loves him so."

A tear stole down her cheek, and the wind came, blusteringly officious, and dried it where it crept.

She lifted her head presently and discovered that the sun was almost gone. The fact startled her into action. Father must not find her here. It would be fatal to her plans for him to know she had come down for the mail. She was going to Boston—to-night—to convince Charlie's employers that he had not done what they accused him of. She was going to clear him of this preposterous charge. But she was not going to tell father.

She put the paper hurriedly beneath her shawl and looked up the road. If she could get in without father seeing her, he would run down himself for the mail, and finding nothing in the box would think the paper had not come to-night. Then he would go back contentedly to his preparations for Charlie's home-coming.

The tears stung her eyes. She began to climb the hill hastily.

She was not afraid that in her absence anybody would tell father what was in the paper. At this time of the year there was absolutely no traffic up the road. Ann Tracy's son was not at home, and Ann herself never looked at a newspaper. Father was safe so far as she was concerned.

She was most troubled about an excuse for being away all night. She had not found one when she stood again in the kitchen, breathless, but secure from the first danger.

Father had not seen her. She went to the window and looked out across the barn-yard, as she had done an hour ago. There was no tender raillery in her heart now. Its place was occupied by a yearning pity.

She saw Elijah come out of the barn, and a mist swam before her eyes. He was so sure, so joyful. And he did not know the joy was all shattered.

She put the paper away where it would not be seen. As she did so the address-slip came uppermost. Her gaze rested on it unseeingly. Though it was under her eyes, she did not observe that it bore the name of James Tracy and not that of Elijah Wynwood.

"If I don't hustle, I shan't get that letter before dark. I'll bet a dollar it's there."

Elijah Wynwood swung down the hill with great strides and pulled up at the box at the corner. He threw the lid up with an air of assurance. Then his face fell.

There was no letter after all, nothing but the weekly newspaper. He pushed it aside unceremoniously, looking for something better beneath. It was not often that he treated the *Hilton Courier* with such scant ceremony. The arrival of the weekly newspaper was always something of an event. It did not seem nearly so important to-day. What could it contain to equal the news that Charlie was coming home?

He picked it up presently and shut the box with a jerk. Then from mere force of habit he unfolded the sheet.

"This will kill mother!"

The words were breathed forth with strong conviction into the darkening night. The sun was gone now. Its light had just sufficed to guide Elijah Wynwood's eyes through a single item in the *Hilton Courier.*

It grew darker after that low-spoken sentence, while still Elijah stood on the wind-swept road.

"I wouldn't look into her face and see it whiten with the pain of *this* for a thousand dollars. Why, she loves that boy like—no, I can't find anything in the world that *is* like her love for Charlie. She mustn't know. I'll go and bring him home. If there's a lawyer in Boston, that boy's name shall be cleared. He shall be home for Thanksgiving yet. Mother would break her heart if he didn't eat them cranberry-tarts and punkin-pies. The worst is I shall have to be away to-night, but I'll fix it so she doesn't suspect."

Was that a tear the darkness hid? Certainly Elijah's roughened cheek was wet. His toil-worn hand trembled as he carefully folded the newspaper and tucked it away well out of sight in his pocket.

Half an hour can be a long time under some circumstances. It was just thirty minutes from the time Elijah sat down to supper until he stood with the door-knob in his hand. It was the longest thirty minutes of his life.

"I reckon I'll run over to Widow Tracy's and look at that sick cow," he said. "Seems awful unneighborly to leave a lone woman to tend a sick cow. You won't be real lonesome if I'm not back before morning?"

He carefully veiled the anxiety in the question. He need not have feared. Margaret's face visibly brightened.

"Not a bit. I should hate to have you unneighborly," she said. "Don't you try to come back to-night. There's sure to be something you can do."

Elijah drew a deep breath as he shut the door. The smile died from his lips. He did not need it now. It had done its work. It had been a hard fight, but he had not dashed the light out of mother's gladness.

"She never suspected a thing," he told himself, hurrying away into the darkness.

Inside that closed door a faded face fell into lines of pain. Margaret stood up nervously.

"To think he found a way out for me himself," she said. "And he did not suspect.. He won't know I'm gone till to-morrow. I'll leave a note to tell him I was called away. And I'll put everything ready to his hand for dinner. Please God I shall be back by night—with Charlie."

The evening had closed in dark and stormy when Margaret stood on the way-side platform waiting for the train. The shrieking of the wind had struck on her heart at every step of the two miles she had walked. A glad heart can defy a storm, but a sad one hears sobs in the moaning night.

Each minute of waiting, peering into the darkness of that long steel track, stole away a little more of her hope. She had felt so sure when she started. Now—

What was that the paper said? He hinted at an elastic source of income? Back to her mind came Charlie's words when he last said good-by. "I'm getting richer than you know. Look out for a city millionaire when I come back one of these days."

"He wouldn't do wrong for money," her sore heart whispered. But it ached the harder for the memory of those words.

In the hand-bag she carried she had been careful to put her check-book. There were three hundred dollars in the bank, egg-money, all her own. If Messrs. Flint & Co. would not let him come home any other way, they could have it all.

Hark! That was the rumble of the train. It was stopping at Greenwood station above. She drew nearer the steel rails and waited nervously.

Greenwood station was barely a mile across fields from Widow Tracy's farm. Farmer Wynwood had just time to look at the sick cow and get there to catch the train. He swung onto the last coach and

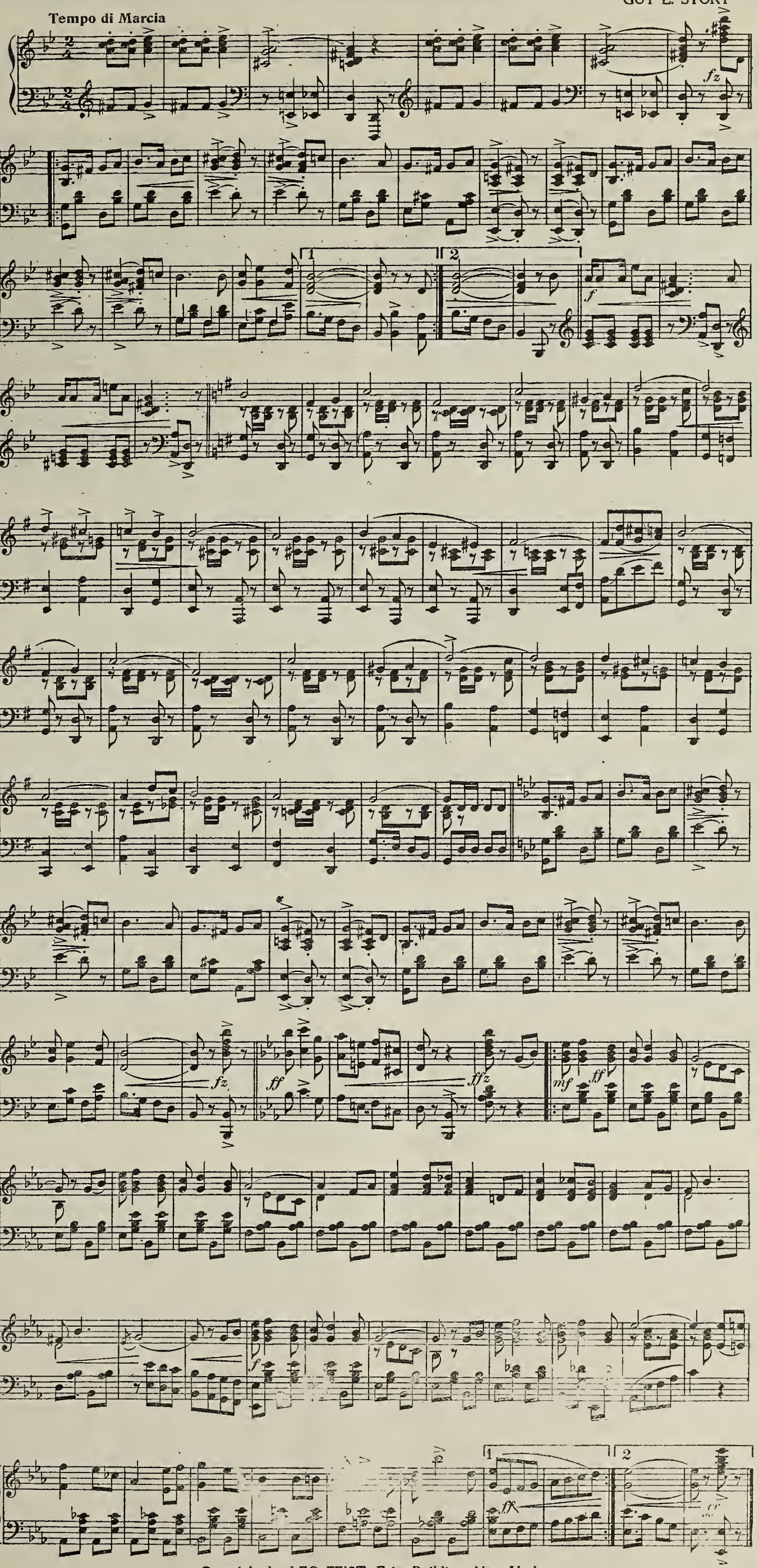
[CONCLUDED ON PAGE 27]

Shooting Stars

Intermezzo—March and Two-Step

GUY L. STORY

Tempo di Marcia



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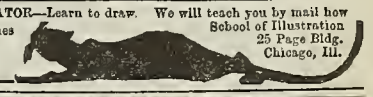

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"Just think! I have not had a pill or a cathartic since I began and I used to take one every night."

"*My weight has increased 30 pounds.* I don't know what *indigestion* is any more, and my *nerves* are *so rested!* I sleep like a baby."

"Miss Cocroft, I have *taken off my glasses* and my *catarrh* is so much better. Isn't that good?"

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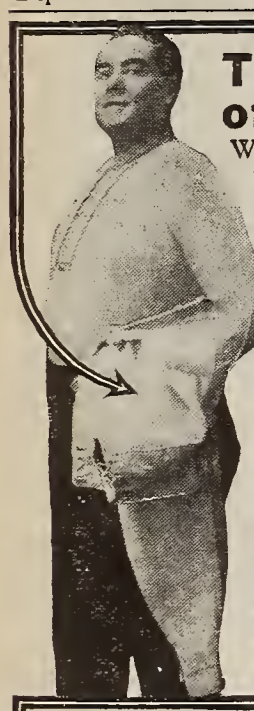

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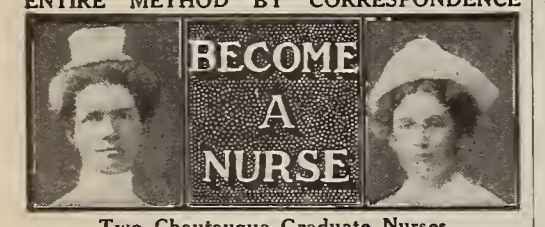

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A Country Church That Has Made Good

By M. B. McNutt

Chapter II.

WHAT was the matter with this country church? What is the matter with this type of country church? My diagnosis of the case is, simply, a lack of vision—a lack of adaptation to the new needs. There are many good preachers failing in the country churches for the same reason. They lack adequate conception, they fail to see the possibilities of country life. There was a time when preaching and an occasional pastoral visit was all that was demanded of the country parson. And the people were thought to perform their part quite well when they attended church regularly and paid the minister's salary. But it is not so now.

The Head of the Church, Jesus Christ, once said, "I came not to be ministered unto, but to minister." Believing that He intended His church to be a ministering church, I began at Du Page with the idea that religion has to do with the *whole* man—body, mind and spirit; that it deeply concerns his social life, his education, his amusements and everything else that pertains to man's well being, and that the church, to succeed, must minister to the various needs of people.

I was brought up in a country church, and the idea I got of it in my boyhood days was that the church is a sort of a Sunday affair which dealt exclusively with men's souls and good clothes. A place of long faces—for if there was any hilarity among the boys at meetin' we could always depend upon the hazel brush being brought out when we got home. A place where dead men's bodies were carried—the funerals were invariably held in the church. And the preacher, well do I remember how fearful I was of him, when, clad in his long black broadcloth coat, he would make his annual visits to our home. Two men I greatly feared in those days. One was Reverend Mateer, the preacher, and Mr. Turney, the butcher.

As boys and young men we never associated our good times with the church or the minister—except the annual Sunday-school picnic, which was truly a delightful affair. The church did not seem to have much to do with our daily lives, our occupations and amusements. It demanded nothing of us, apparently, but to go to church and sit still. Our companionships were all outside and independent of the church. It was in the days of the husking bees, the apple-cuttings, the sugaring-offs and all those most interesting and wholesome neighborhood pastimes in which old and young alike engaged with such pleasure and profit. It was before the time of commercialized amusements—the public dance hall, the cheap vaudeville and the amusement parks. It is alarming how rapidly these modern creatures are stealing in upon the quiet country people in these days of the trolley, the automobile and the horse and buggy—which every young man in the country, even the hired man, now possesses. It is much easier at the present time to get into the world current than it was thirty years ago in the country.

But coming back to the old type of country church it did not seem to offer us much but a long, dry sermon on Sunday—and it was dry to the boys and girls—a hard straight-backed seat, a book from the Sunday-school library in which the good boys and girls always died and went to heaven and those delightful annual visits by the pastor.

Now, I love that dear old country church of my childhood back in the hills of Pennsylvania, and I like to think that it did me a great deal more good than I realized either then or now. It might have done worse. And it is farthest from my purpose to speak disparagingly of it or of the dear people who directed it. I love them. But what I am emphasizing is that that type of country church is not adapted to the needs of the country people to-day.

With these recollections of my boyhood and the church, I resolved that I would, first of all, get next to the boys and girls, and that I would make that old church a great center of attractions. Notice I do not say *the* great center. I do not believe in the church attempting to do everything or trying to do what might better be left to other institutions. But *a* great center of attractions—a hub of joys, of happy and precious memories and associations for that entire community. I determined with God's help to make it an indispensable institution to every man, woman and child within its reach.

One of the good old Scotch elders—they called him "Uncle Dan," one of the dearest and best of men—put his arm around me one day, it was a way he had of greeting everybody, and said, very seriously, "Our young people have got to dancing and are being wooed away from the church and from God. How are you going to deal with them?" I told him that I knew from experience that young people would dance if they had nothing better to do and that I proposed to give them something better. "Weel," he continued, "just before you came here our session passed a rule that there was to be no dancing by members of the church. But I fear there is going to be trouble when we come to enforce it." I replied, "Uncle Dan, you can not shut off a stream entirely unless you give it some other outlet."

It should be stated here that a hall three miles from the church had been fitted up to house an organization that took pride in calling itself "The New Era Club," but whose chief object and amusement turned out to be dancing, though its original promoters had hoped for it better things. Some of the young people of the neighborhood and church were spending their evenings here and naturally the dancing element from the surrounding towns were attracted hither.

I set to work first and organized an old-fashioned singing school. It might have been anything else—a class in scientific agriculture, domestic science, animal husbandry, nature study, or indeed, all of these and similar useful subjects for investigation. I chose the singing school because I had some knowledge of music and because music interests and charms almost everybody. The idea is to get the people of a community united in *doing* something useful.

There was good musical talent among the young people and this new enterprise proved to be a great hit. Out of it grew a good strong church choir, a male quartet, a ladies' quartet, an orchestra and some fairly good soloists. Besides, it improved the singing in the church and Sunday-school one hundred per cent. All the young folks learned to read music readily and it has become a real pleasure for them to sing. One remarkable thing about the singing school was the predominance of boys and young men, and ever since our choruses have had a strong masculine note—a happy contrast to what we boys used to call a "hen choir" found in some churches.

The revival in music has been felt in the homes as well as in the public meetings. The young people are taking private lessons on the organ, piano, violin and cornet. Some are cultivating their voices. I was visiting in a home one day and I remarked to the mother that her girls ought to have an instrument. "Oh," she replied, "there's no music in our family—it wouldn't be worth while." I said to her, "Just give them a chance." Soon the instrument was secured, a cheap organ at first, later a splendid piano. Those girls now play and sing beautifully. Many similar instances could be given. Parents have been encouraged to give their children opportunity to develop their musical talents. I myself have given private lessons on the violin just to help some young man to get a start in music. We cultivate a musical atmosphere. There is scarcely a home in the parish now that does not have an instrument of some kind. The most delightful public entertainments we have, and the best attended, are the concerts and recitals given by the musical talent of our community. These special occasions act as a wholesome stimulus to our musicians and call for their best efforts. [TO BE CONTINUED]

[The first chapter of this interesting series of articles was published in our October 25th issue.]

Facts About the Rose

By John T. Timmons

IN FRANCE the cultivation of roses has become so much a science, or so much a mania, that when an authority on the subject recently prepared a complete list of the known varieties of roses, it was found that the names alone, without definition or description, filled forty pages of closely printed text. Of the tea roses alone there were one hundred and twenty-two varieties, counting from the "Adam" to the "Zelia-Pradel." A recent communication to the Horticultural Society of France gives an account of what is believed to be the oldest rose-bush in the world, the great bush which grows against the church at Heldersheim, in Germany.

It is believed to date from the epoch of Charlemagne—the close of the eighth century and the beginning of the ninth. The local tradition has it that the rose was planted by Charlemagne himself.

This great rose tree grows from a crypt under the church, the crypt having been opened at the top for the evident purpose of letting in light and air for the bush. For this reason it is assumed by many persons that the bush is older than the church itself.

The trunk, which is as large as a man's body, traverses obliquely the wall of the church and enters the open air several inches above the surface of the ground. There it divides into five branches of unequal size. The bush covers a surface of about seven yards in height and eight in width on the side of the church, where it is kept in place by an iron railing.

A bishop named Hepilo was the first to put up a framework to support the branches of the rose, and the fact is mentioned in the archives of the church as occurring in the year 1079. An account written in the thirteenth century declares this rose tree to have been the marvel of the country round about.

Rose-growers nowadays are not content to grow and enjoy the roses already known to be beautiful and fragrant, but devote their efforts to the production of new varieties. By far the greater part of these are hybrids or crosses from other varieties. Nearly three hundred species of the rose have been enumerated, but botanists now reduce these to only thirty which show real specific differences.

The French originators of new varieties are often hard pressed for names to bestow upon them.

One of the most famous roses is named for General Jacqueminot, a French officer, whose renown as a rose-grower is quite as great, to the world at large, as his fame as a soldier. But the name, in familiar speech, has been shortened down to "Jack."

Among the most recent varieties of roses there are many fantastic names. The "Mourning of the Emperor Maximilian" is of a dark purplish red in color, and the "Emperor of Morocco" is of a dark velvety crimson. There is a "Fighting Lion," a "Conqueror of Goliath" and one still more strangely named, the "Genius of Chateaubriand."

One of the most wonderful roses is a wild inhabitant of the United States—the Cherokee rose. It is an emigrant from China, but it was known to botanists as growing in Georgia and the Carolinas before it was known to be a native of China.

In a botanical work published in 1821 it is mentioned as having been "cultivated in the gardens of Georgia for upward of forty years, under the name of the Cherokee rose." How it first reached this country no one knows, but it soon escaped from its first American garden to the woods and became so common there that it acquired the name of the tribe of Indians which occupied the upper part of Georgia and the Carolinas.

The Cherokee rose easily forms dense, thorny hedges or thickets, through which no animal can penetrate. The flowers are large, single, pure white and fragrant; they bloom throughout the month of February, and often all winter long. In the Northern states the Cherokee rose blooms only in hothouses.

The Wheat of Life

A Thanksgiving Sermon

By Rev. Charles F. Weeden, Harvard Church, Boston

LIFE is a sifting process. To children the world is beautiful, but chaotic. Hold a new Lincoln cent and a five-dollar gold piece before a child and he is likely to choose the cent. Gradually out of the confusion comes form, name and value. To put a label upon things and to say this is hurtful or to tag that and declare that is beneficial requires judgment.

Lord, let me make this rule,
To think of life as school
And try my best
To stand each test
And do my work
And nothing shirk.

What is the chaff to the wheat? The intelligent man discriminates.

Wheat is Man's Food

The word wheat means in the Hebrew the pure grain after it is winnowed. The chaff is good for a time. It is necessary for the beginning of life. The husk protects the corn, the glume covers the grain. You would not teach a baby psychology or to run a mowing-machine. But there comes a time of separation when we ought to be up and at the real things in life, when the shuck must be torn from the corn and the glume from the wheat. It is the bolting process. For most of us it will require the flail of discipline or the plow of sorrow to discern the right from the wrong. Toys and chaff are for childhood. For the man the main business is to get at the wheat.

What do men say is the wheat? There has been three times as much wealth produced during the nineteenth century as during the eighteen centuries preceding. But is wealth alone the wheat? Nineteen hundred and ten has grown enormous crops, and in October $170,000,000 in dividends were distributed. Corn, oats and cotton are out for a new record. Riches are piling up. I have seen the bird-men fly gracefully thousands of feet high and soar around Boston Light at the rate of a mile a minute. It is man's conquest of the air sure enough. But bumper crops and scientific skill will not do without the growth of a man's soul. Let us remember, if the child grows in body but not in mind, he becomes an idiot. If he develops physically and mentally but not morally, he becomes a criminal. If riches increase, set not your heart upon them. Men seldom believe history until they have made a little history of their own. Men who think, begin to observe that they are doing the same things over each year without making any real progress.

Dropping buckets into empty wells,
And growing old in drawing nothing up.

The wheat of life is that which deepens and ennobles. Benjamin Franklin said: "As for a little money and a little more time, why, it is ten to one if either one or the other would make you a whit happier." Pleasure as an end is a dancing thistledown. Men are forever chasing it. The body can not be satisfied with straw. A veteran at eighty years said: "As I look back over a long and happy life, the only angels on the road are deeds done for Christ, and the only ghosts are memories of lost opportunities. It is infamy to die and not be missed, but to live for our blessed Master and our fellow-men is the beginning of heaven."

What is God's Testimony

about the wheat of life? "The words that I have spoken unto you are spirit and are life." A French historian writing of our late war with Spain said that "the Spaniards wish to find the cause of their defeat, and because of their temperament they seek it everywhere except in themselves, and yet that is just where it is." The trouble is deeper than the temperament. Once in a while our battle-ships go to sea for target-practice. On the guns is the range-finder that enables the sailors to shoot with wonderful accuracy. The Bible is the range-finder of human life and hits the mark. The wheat of life is God's Word. It teaches us to live for the other fellow. It will not do to give Cain's answer. Carlyle tells of a woman in Scotland in the days before charity was organized. She wanted help because she was poor and sick. The town replied, "You may look out for yourself." She died of typhus fever and killed seventeen others with her poison. They said: "You are not our sister." She said: "I am and I will prove it," and she did, though it cost seventeen good lives. There will be something worse than a fatal fever in this land unless we do more than fill our own barns and larders. "Look out for number one," somebody says? Yes, that's our business. God help us if we fail to do it. But we must look out also for number two, number ten and number ninety-nine! The wheat of life is to be heart and soul interested in humanity.

Wheat Possesses Life in Itself

Nobody will plant chaff and expect to grow grain. What in this world never dies? Kind words, unselfish deeds. The act of the woman of long ago—we do not even know her name—who broke the alabaster box upon the Savior's feet is told as memorial of her to-day. America playing the good Samaritan to thief-ridden Cuba stands forth like a lighthouse in history. It flashes in the darkness of a selfish, thoughtless world. In Copley Square, Boston, is a statue of Phillips Brooks. The inscription reads: "Preacher of the Word of God and lover of mankind." So in 1860 when sullen clouds of war threatened the nation God was "sifting out the hearts of men" for a great leader, and Abraham Lincoln stood forth like Moses among the people. What a great-heart he was! The very wheat of humanity! So the Almighty has sifted the race from its cradle and brought out the finest of the wheat: Abraham, Joseph, Daniel, Socrates, Paul, Augustine, Savonarola, Charles Martel, Luther, Cromwell, Wilberforce, Gladstone, Washington, Florence Nightingale, Frances E. Willard, Queen Victoria. These are God's noble men and women who gave food, force and uplift to their fellows.

Here is the significance of our harvest festival. We love it for its life and because it emphasizes what lies at the foundation of our nation, the home. We appreciate the man who is fond of his home. Really, Thanksgiving Day is the hour of woman's triumph. She is the center and supreme joy of the occasion. It is a feast of the soul to picture this home gathering. That it brings sadness to many hearts calls forth our deepest sympathy, but is it not best to accept the brighter lessons of the day and go bravely on? It is the young people's festival, too. There is the sturdy, bronze-faced youth whose strong arms have sown and reaped. But among the members of the family group, faces wrinkled and faces fair, there is a youthful girlish figure that moves deftly, cheerfully, helpfully in and about the circle, ministering with sweet and gentle grace to all—verily a princess. Her price is far above rubies. Nothing may be more elevating, life-giving and beautiful, save the queen herself—than the young woman in the home.

The chaff and wheat suggest, finally,

A Comparison of Values

Both God and man make no account of material when man's interest is at stake. What is the cargo when the ship is on fire? Heave it overboard! Whether junk or cattle or cotton, aye, if every bale were solid gold and every hoop studded with pearls—overboard with it! The consumption of carbon in the sun to give power, light and heat to the earth no scientist can estimate. God spends everything for men. Here is the world's mistake; thoughtlessness about the soul.

A couple of men called upon a large farm-owner in the Middle West. He took them up to the cupola of his house and told them to look over yonder, just as far as their eyes could reach, over that beautiful rolling prairie, and they said, "That's fine." Yes, and it was all his. Then he took them up to another cupola, "Look at that farm, and that, and that." Then he showed them horses, cattle and sheep-yards—"They are all mine, and I came West a poor boy, and I am worth all this." But when he had finished, one of the men asked, "How much have you got up yonder?" and the old man looked sober. "Well, I have not got anything there." "That's a mistake, isn't it? A man of your intelligence, forethought and judgment to amass all this wealth and you will have to leave it all." "It does look foolish," he admitted and his eyes flooded with tears.

Just What are *YOU* Planting?

Once there was a lad reared in Vermont who paid his own way through college, making the most of his chink moments and working vacations. His father had a hard fight to support a growing family in a country district. Later the young fellow was found in Chicago as clerk in a large railroad office. He gathered all the information at his hand. Then he lived in Altoona and accepted a place in the Baldwin Locomotive Works until finally by diligent, faithful work he advanced to the presidency of this big corporation which employs thousands of men, enough to "populate two states like Nevada." This captain of industry was John H. Converse who, having become a rich man, announced that all he received over a reasonable income he would give to his fellow-men—and that meant millions—and who also said, "I am a Christian because I feel that is the only true way of happiness and peace both for this life and the life to come." He planted wheat and generations rise up and call him blessed.

Another bountiful harvest is gathered in. Our barns are filled to the top beams. What of the immortal harvest of your soul? Shall we allow our big granaries to hide the deeper realities of eternity? What shall we do for God and country? God gave at length His only Son, the Treasure of His heart, come down from heaven, not even the wheat, but threshed and winnowed, made perfect through suffering, the living bread for the life of the soul.

Don't Allow Yourself to Become Reckless

Feeding upon chaff we become like the chaff and regard human life lightly. Partaking of wheat we have life-giving power, forever. My friend, do not allow the world to make you reckless or a mere machine. Business may do it, politics may do it, ranching may do it, rut religion may do it, anything of this world may do it—unless you make God, His truth, His service, His Christ, the wheat, the ambition of your life. It may be hard to be a Christian farmer—anything worth trying for is hard—but to be a Christian means a better life each day; fresh battles, development, growth, self-realization, moral fiber, unconquerable power, eternal harvests! Put all value upon your best self. Old age counsels it, the "down and out" warns it. For God so loved the world—that means you—that he gave His Only Begotten Son—heaven's estimate—that whosoever—some soul, any soul, every soul, *your* soul—*whosoever* believeth in Him should not perish like the chaff, but have everlasting life.

God sifted the nations of Europe until a Pilgrim band with the love of liberty blazing in their veins, enduring persecution, at length with stout hearts ventured across the unknown Atlantic and dropped anchor in Cape Cod Bay. They starved and fasted and prayed that out of their toil and agony might come our day of feasting and Thanksgiving. Are we grateful? Out of our abundance what are we handing down to the children of to-day and to-morrow? Ingratitude is the basest of sins. Has your life made some one happier? Only yesterday I read the reckless, despairing plea, "nothing to live for." Not all in the Mayflower were loyal, disinterested men, but that cabin-compact of the true-hearted has gone abroad in the land and the spirit of the Mayflower is still sailing on freighted with hopes and fears and prayers and tears, but with a blessing and power that creates life, redeems the desert, purifies our great cities, sustains our schools, defends our homes and by righteousness exalts the nation.

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A Century of Achievements

Reasons for Being Thankful

By Richard M. Winans

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Marconi, inventor of wireless telegraphy

As an individual you should, in the beginning, be properly thankful that you are alive. That should compensate for anything we may not feel inclined to be thankful for—as witness, an empty pocket. However, being alive, you know, provides the fighting chance to fill it again, and that's something worth thinking about.

Life, pulsing life, with either its spring songs or the slow and stately marches of a winter's eve, with its hope and fear, its sunshine and its rain, is a precious asset to hold in the inventory of our personal possessions.

As a nation we have such a multitude of things to be thankful for that we should consecrate our Thanksgiving holiday as a memorial day on which to gather the straying threads of the year and unite them into one grand halleluiah of praiseful, prayerful Thanksgiving.

The material things we have been thankful for in the past are ours to-day; only now in a higher state of development and perfection. They still command our fullest tribute of gratitude in their possession; the railroad, the steamship, the telegraph, the telephone, the printing-press, the typewriter, the phonograph, the art of modern photography, the electrical current, the improvement in medical and surgical skill, the advance in the science of agriculture, the spread of agricultural education, the great strides in invention of implements and machinery to lighten the labor of the farm that save time and increase profit, and a great many other things which contribute to our pleasure; our comfort, our convenience, our industrial progress and our general welfare.

Because these things have become an integral part of our business system and our daily lives, because we look upon them as settled institutions and indispensable necessities, does not in any wise depreciate their intrinsic value or make the degree of appeal to our thanksgiving for them any the less. On the other hand, we should be doubly and devoutly thankful we have had these things so long to be thankful for, that they were, the most of them, and to the most of us, a heritage, which we have been permitted to enjoy from the beginning of our lives.

Luther Burbank, originator of new fruits and flowers

The flying-machine, the latest inventive dream to be practically realized, carries with it greater possibilities than were contemplated by its pioneer builders. When Curtiss from an aëroplane first dropped his mimic bombs on a warship, there was demonstrated the earnest of a new warfare that sounded the death-knell of the world's warships. It was the opening of a campaign that eventually will accomplish the disarmament of the navies of the world.

It will mean much to us, who have spent $15,000,000,000 and nearly 4,500,000 men in our country's wars, with almost $4,000,000,000 in pensions to date. The increase in cost of maintaining our army and navy since the Spanish-American War has been $1,100,000,000. This increase alone is twice as much as the highest estimate for completing our proposed deep waterways, three times the cost of replanting the 6,000,000 acres of denuded forest lands, three times the cost of the Panama Canal, three times the cost of carrying out the entire irrigation program contemplated within a generation, and probably enough to banish from our land the great white plague from which 150,000 die yearly. It would give sixty dollars to every family in the land and, at four per cent. interest, would provide an annual income to 42,800 families. But at present we are pouring our treasure into army and navy at the rate of $240,000,000 a year, with yearly pensions of $170,000,000 in addition. Just think what a fabulous amount of money!

Glenn Hammond Curtiss, successful aviator

So surely as the flying-machine holds its course on the line of its present development, so surely will it one day make the armies and the navies of the world its playthings in the tragedy of war—and then there will come as a result that Utopian era that Tennyson dreamed of,

When the war-drums beat no longer, and the battle-flags are furled,
In the parliament of man, the federation of the world,

when we may adopt for the flying-machine the significant world emblem of a dove on the wing, bearing an olive-branch of peace. And we, with the battle-cries of Ticonderoga, of Lundy's Lane, of Palo Alto and of Gettysburg and the thunder of Manila and Santiago still echoing their tragedies through our history, will add prayers of praise to our thanksgiving for the coming of the flying-machine and its achievements.

The wireless telegraph sending its urgent cry for help hundreds of miles through the fog and the night over tumbling seas to vessels that quickly race to succor many hundreds on a sinking "Republic" or "Kentucky" has given thousands cause for very real thanksgiving.

All government vessels, over two hundred passenger-carrying ships entering our ports, and many freighters and harbor boats are equipped with wireless outfits.

Wireless communication has minimized the chances of collisions at sea and the dangers of shipwreck; has revolutionized the movements of battle-ships in naval warfare; has made it almost impossible for a Crippen to escape undetected to friendly shores; has made it feasible to print a daily newspaper full of real, live, up-to-the-minute news of the day on board the ocean liner for the benefit of the water traveler; has bridged the seven seas with intelligible speech, carrying for a distance of about 5,600 miles; has reduced the rate of international transmission; has established a line of communication in time of war almost impossible for an enemy to destroy.

Hon. James Wilson, secretary of agriculture

With wireless telephony perfected it will be possible for the farmer to receive, simultaneously with his neighbor, government reports of the weather, the crops and the market, and, also, the last happenings in the day's news as he sits in comfort by his fireside, or to hear the latest songs and operas over his wireless telephonograph. For all of which we should thankfully erect a memorial to the genius of Marconi.

The Panama Canal will join the oceans and bring together our widely separated sea-coasts, will prove a factor in the development of Latin America, extend our commerce, spread American ideas and ideals, increase our shipping, facilitate interoceanic traffic and practically double our sea prestige among the nations.

The new auto fire-engines and trucks offer greater fire protection to city property and also present the possibility for a practical rural fire-fighting corps, almost as effective as those of the towns.

The interurban trolley lines have brought the city to the gates of the farm home and opened a rapid-transit channel for marketing the perishable products of the dairy, the garden and poultry-yard, while providing the ready means of spending an evening at the town theater, the concert or the lecture and a convenient way for all of the family to do their shopping in the big stores of the city.

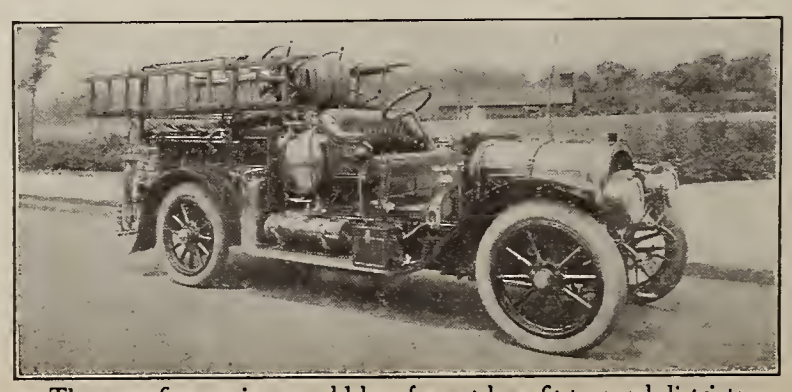
The submarine bell that hears and locates warning sounds from buoys and coast lights and from other ships in fog and darkness has been the means of preventing ships from wreck on the rocks and collisions at sea, with the always possible result of hundreds of lost lives.

Corn-stalk paper made by a process perfected in the laboratories of the government scientists will prove of almost greater importance than anything else accomplished by them. It will open a new and valuable market to the farmers of the country for a by-product now largely wasted; the cost of manufacturing paper will be cut in half, a supply of raw material practically limitless in quantity may be assured and, most beneficial result of all, the wholesale destruction of the forests to obtain wood pulp will cease.

Professor Roentgen, discoverer of the X-ray

The plant wizard, Luther Burbank, has given us several things to be thankful for, among which is the latest development of the spineless cactus, which will transform the wastes of the great deserts into rich grazing lands for millions of cattle and so open a new field for the greatly needed production of more meat. Also for the development of a new cactus which yields both sugar and alcohol; human fuel and industrial energy.

The national policeman, in the person of the secretary of agriculture, has recently been vested with authority to exercise a beneficial power in the protection of our 90,000,000 people greater than any other man, since he now almost absolutely controls the purity of the food, meat, drink and drug supply of the country. Also, he is doing much to stamp out the gipsy and brown-tail moth, the cotton-boll weevil, the cattle-tick and mange, sheep-scab and animal tuberculosis. He now protects the farmer in his purchase of seeds, feeds and fertilizers. Besides making the manufacturer print on the label the make-up and artificial coloring used in near-true food products, as well as the injurious contents in drugs, he is now going to compel the "patent medicine" makers to print on each package the actual ingredients of the nostrum, and this will mean the complete and sudden wiping out of the whole questionable and pernicious patent medicine business, a thing we will be quite as thankful for as anything he has done.



The auto fire-engine would be of great benefit to rural districts

The X-ray has enabled surgical science to perform wonders in the field of operations, and given hundreds cause to thank its aid

[CONCLUDED ON PAGE 27]

For Your Thanksgiving Dinner

Recipes to Make It a Success

THANKSGIVING with its time for rejoicing has come once more. To-day it is celebrated with as much enthusiasm as was shown by our Pilgrim forefathers on the first Thanksgiving. It is true that the housewife of to-day may not spend so much time cooking up Thanksgiving pies and puddings and dainties as did the colonial dame of old, but nevertheless she is just as thrifty and is always on the lookout for new and palatable ways of serving every-day dishes. It is especially for her benefit that this article with all these good, tested recipes has been prepared.

Cream-of-Celery Soup—Scrape and cut up a couple of good-sized stalks of celery. Put in a saucepan with a quart of boiling water and cook until tender. Take out some of the nicest pieces of celery, chop into dice and set aside to be dropped into the soup when ready to serve. Take the rest and press through a colander, return to stove and bring to the boiling-point again. Set a little back on the stove and add about half a pint of cream, stirring all the while, and enough flour to make it a rich, creamy consistency. Stir constantly. Add a little butter, about a tablespoonful, and salt and pepper to taste.

Place on the front of stove again and just before it comes to the boiling-point remove and serve, dropping into each plate or the soup-tureen the cubes of celery laid aside for that purpose.

Yorkshire Pudding—This delightful adjunct to roast beef is both nourishing and tempting, and easy to prepare.

Cook the roast in the usual manner, basting it sufficiently to keep it moist and juicy. About fifteen minutes before the beef is all cooked, withdraw from oven and pour almost all of the drippings out of the pan. Put a small inverted bowl in the center of the pan and place the roast of beef on this and pour into the pan, all around the roast, the following batter:

Beat two eggs, add two scant cupfuls of milk and into this sift enough flour to make a batter of the same consistency as for muffins, a teaspoonful of baking-powder, a pinch of salt and last of all a tablespoonful of melted butter.

After this batter has been placed around the roast, put the whole back in the oven until the pudding is a rich brown. The drippings from the beef, falling upon the batter, will give it a fine flavor and help brown it. This is an old English dish and is very appetizing.

When serving, carve the beef as usual and cut a generous piece of the pudding surrounding it to go with each portion.

Sausage Stuffing for Turkey—Remove the inside of a generous loaf of bread (a stale dry loaf is necessary) and rub into crumbs. If this does not make three cupfuls, add some cracker-crumbs. Into this gradually work one quarter of a pound of sausage-meat and one half of a small onion chopped very fine; half a cupful of finely chopped celery, two tablespoonfuls of melted butter, sage, thyme and pepper and salt to flavor.

Chicken-Pie—Clean and cut up two chickens as for chicken fricassee. Put in a saucepan and add half of an onion, a little parsley, half of a bay-leaf and boiling water enough to cover. When the pieces of chicken are half cooked remove from fire and place in a colander and drain off stock, and remove the fat from this. Flavor stock with pepper and salt, and put back over the chicken, letting the whole cook slowly until there is about a quart of material in the saucepan. Thicken with flour and milk, mixed together. Place an inverted cup in the center of a baking-dish and around this pour the chicken and fluid, and set aside for ten minutes. Make a pie-crust of one and one half cupfuls of flour, a quarter of a cupful of lard, a quarter of a cupful of butter, a generous pinch of salt and enough cold water to roll smoothly. Cover the baking-dish with this pie-crust, making the edges very firm upon the dish and making a hole in the center so that the steam will escape. Place in an even and moderate oven and bake until crust is brown and puffed.

Scalloped Tomatoes—Take a quart can of tomatoes or a quart of freshly stewed tomatoes, add to them half of a small onion finely chopped, put them over a slow fire and cook until they begin to thicken. Add enough stale bread-crumbs to make it nice and thick. Add a tablespoonful of butter and flavor well with pepper and salt and a tablespoonful of sugar. Pour into a baking-dish and have ready some buttered bread-crumbs (a saucerful), sprinkle these over the tomatoes; place the baking-dish in a quick oven until brown.

Stuffed Egg-Plant—Select a smooth, heavy plant, cut off the top evenly and scoop out all but a half-inch thickness of the pulp. Boil the shell in salted water for ten minutes. Chop the meat that has been removed, mix with bread-crumbs, one egg and small onion browned in butter. Return to egg-plant, put on the top slice again and bake in oven until tender—from twenty minutes to a half hour.

Cauliflower-Salad—Soak cauliflower in cold salted water for an hour, lift out and place in pan containing only sufficient boiling water to reach just below the flowers. Boil uncovered, so that the flowers will not darken, until the lower stalks are tender. (The blossoms themselves cook in a few moments.) Cool, then chill on ice. Cut into pieces, lay on lettuce-leaves and pour over a very little French dressing, made, if possible, with tarragon vinegar. Trim with rings of green or red peppers and pass with it foaming salad sauce.

Foaming Salad Sauce—Beat the yolk of one egg very stiff, add to this a teaspoonful of lemon-juice, a tablespoonful of olive-oil and a pinch of salt. Beat well with wire beater and set in cool place while preparing the other ingredients. Whip the white of the egg until it stands alone, add a little powdered sugar and five tablespoonfuls of thick cream. Beat until stiff, add to the yolk mixture and blend well with beater. It is delicious. Be sure to clean your beater before you take it from the yolk and put it into the white of the egg. If you do not, the white will not whip up as it should.

Cheese Eggs—These should be passed with the cauliflower-salad. Moisten cream or cottage cheese slightly with sweet milk or cream and mold about blanched almonds to simulate birds' eggs.

Cream Cranberry Pie—Two cupfuls of cranberries, one cupful of hot water, one and one half cupfuls of sugar, one cupful of chopped raisins, two level tablespoonfuls of corn-starch, two tablespoonfuls of vanilla.

Cut the cranberries in half, pour hot water over and allow to cool. Add the raisins, vanilla and the sugar and corn-starch mixed. Cover with top crust and bake. Just before serving lift top crust and carefully spread with a thick layer of sweetened whipped cream.

Mocha-Cake—Four eggs (whites and yolks separated), one cupful of powdered sugar beaten with yolks, three tablespoonfuls of extract of coffee, one cupful of flour, one tablespoonful of baking-powder. Beat whites in last and bake in shallow cake-tins (not plates).

Filling—One pint of cream whipped stiff, add a cupful of powdered sugar and a tablespoonful of coffee-extract. Spread rather thinly between the two layers, but heap high on top. It will all be one delicate soft gold tint, due to the coffee-extract.

Russian Apples—This is a delightful variation of the old-fashioned baked apple, and is prepared in this way:

Pare and remove centers from six large Greenings, place in baking-pan and pour a little boiling water around them (enough to cover bottom of pan). Fill the centers of the apples with mince-meat, place on each a little tip of butter and sprinkle generously with sugar.

Cook until tender and a rich brown, basting often with the water and adding a little water if that evaporates quickly.

Serve with a hard sauce made of butter and sugar and lemon-juice and a little nutmeg. These apples should, of course, be served hot.

German Fruit-Pudding—Mix two cupfuls of rolled bread-crumbs with an egg and a lump of melted butter. With this paste line the bottom and sides of a baking-dish. Fill the pan with all sorts of chopped fruit—dates, figs, raisins, citron, orange-peel. Add two eggs and one cupful of bread-crumbs. Cover the top with the first mixture and bake slowly for an hour. Serve with lemon sauce.

Individual Charlotte Fruit—Take sherbet-glasses or very deep ice-cream dishes and line with thin slices of sponge-cake. In the bottom of the dish and upon the bottom piece of sponge-cake place a tablespoonful of rich preserves. Beat a pint of rich cream until it is stiff. Sweeten with powdered sugar and a few drops of vanilla. Into this put a half cupful of chopped nuts, figs, candied cherries or preserved pineapple (all chopped *very* fine). Fill glasses or dishes and on top place a little touch of currant-jelly or apple-butter. This makes a delicious dessert.

Mock Candied Cherries—It is sometimes impossible to procure candied cherries for festival occasions, but if large cranberries are carefully prepared as follows, you may have a dish of dainties just as good as the most expensive of candied cherries.

Wash and pick over carefully one quart of fine cranberries.

Place in a saucepan one cupful of water and three cupfuls of sugar and let this boil for about five minutes.

Place the cranberries in a large flat dish and pour the boiled water and sugar over them. Let them stand for about eight hours. Then place berries and syrup on stove and boil until quite transparent, but not until berries break. Drain off syrup. Place berries on large platter on which brown paper has been spread. Sprinkle with granulated sugar. When thoroughly dry, pack in wooden box, if possible, in layers with paraffin paper between.

Chocolate Chestnuts—Boil large French chestnuts until tender. Drain and cool. Grate a square of unsweetened chocolate and blend with a cupful of sugar and a cupful of water. Cook until thick. Take from fire and add vanilla flavoring to taste. Drop in the chestnuts, turn and remove to oiled paper. This is a delicious side dish.

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YOUNG FOLKS' DEPARTMENT

CONDUCTED BY COUSIN SALLY

Bettina's Happiest Day

By Mary Minor Lewis

INSIDE the four white walls of a private room in one of the great Boston hospitals a little girl lay listlessly watching the sunlight as it crept up along the bare walls.

Her face was thin and the cheeks were almost as white as the gown she wore.

For three months Bettina Elverson had lain thus. The pain in her back, which had been badly injured by a fall from her pony, was much better; but the doctor who was taking care of her shook his head sadly and to her father's anxious questions replied:

"I am much troubled about Bettina. She takes no interest in anything, but just lies here day after day thinking only of herself. If this goes on, she will not get well."

"I notice," said her father gravely, "that she has no appetite, and the toys which her aunt sent her last week have remained unnoticed. It breaks my heart," added he, "to see her so—my once merry little daughter—my 'little Sunshine!'"

"Yes," continued the doctor, as he tapped upon the door of Bettina's room, "we must find some way to rouse her. She must not be allowed to lie here any longer thinking always of herself and her crippled back."

"Well!" he exclaimed heartily, taking a seat by the child's cot, "and how is my little girl to-day?"

At the sound of the doctor's voice the child turned her head wearily upon the pillow and a wan smile flitted across her wasted features.

"My back does not hurt me so much," she answered. "I am just tired! I don't like the nurse to read to me. I don't care about toys and things any more."

"You must cheer up," said the doctor briskly, as he patted her hand. "That injured back of yours will get well."

"No! No!" cried Bettina, her voice choked with sobs, "I heard two of the nurses talking in the hall right after I was brought here, and one of them said, 'That poor little Bettina Elverson will never walk again!'"

The doctor's face darkened, and he brought his fist down upon the table with a whack which made Bettina jump.

"Little girl," he said very gently, when his quick flash of anger had passed, "I have a plan for you. I want you to move down into the crippled children's ward to-day. It is like this; I need an assistant in the crippled children's ward—and I think you are just the person I am looking for."

"But my back!" she cried, "my hurt back! I can't do anything but lie here! I couldn't be of any help to any one!"

"Down in the big ward," the old doctor continued, "you will find many children with more pain every day than you have ever had; children who will never be well; children who have no homes to go back to when they are well; children who have never even seen such a beautiful home as you have—nor such playthings as you have. There are some who never knew what love was, nor kindness, until they came into my ward for crippled children!"

The old doctor's voice grew very husky, and he blew his nose hard.

His little patient fixed her great wondering eyes upon the doctor's face—a new light of interest dawning in their sad depths. "Oh!" she cried, "do you think they would like to have me with them—the little charity children?"

"Yes," answered the doctor as he rose to go. "I told them all about you—your beautiful home on the avenue and the summer place on the north shore. I told them about your fall from your pony and your crippled back. They got so interested that I brought that picture of you for them to see—the one with the yellow curls hanging down your back—the one I always keep on my office desk. And I promised my crippled children," he added very seriously, "that you would come down to them to-day."

He explained his plan to Mr. Elverson and remarked, "My crippled children need Bettina—but she needs them more!"

That afternoon a stretcher was brought in and Bettina was lifted gently upon it and wheeled down to the big ward where she was put into one of the little white beds which formed two long rows each side of the ward.

A great many of these beds were empty, because some of the children could be up all day in wheel-chairs. Other little boys and girls were on crutches, and some wore steel braces on their backs or legs, which enabled them to walk.

Bettina was very much interested in watching them and forgot herself in her pity for a little boy in the next bed to hers—a little fellow who could not move his legs. He held in his hands a tiny boat with a sail which was his dearest treasure. He was playing that the counterpane was the sea and his frail boat tossed in a dreadful storm which he made by shaking the counterpane into billows. And this little boy—she learned later—had never seen the sea, nor spent a day in the country! In the next cot a little girl of about Bettina's own age was stringing colored beads into necklaces—singing softly to herself. There was a brave spirit among them all—such an air of hope and cheerfulness within this house of pain!

The next morning, after the children had been bathed and dressed, and after the doctors had been through the ward and had made them all comfortable for the day, Bettina called the head nurse to her cot and said:

"I have a trunk all packed with toys and games and books. I left it in the room I had on the private floor. I want it, please, right here by my bed."

So an orderly brought the trunk in and put it by Bettina's bed, and the children all gathered about and laughed and shouted with delight as each toy was taken out. There were so many that each child got one or more of the pretty things; but those children who could not move from their beds were given the first choice.

When Bettina's father came to see her that day, he was delighted to see his little daughter flushed and smiling! She told him the different children's names and all she had learned about them, and he listened with deep interest.

Every day after that, when Mr. Elverson made his visit to Bettina, he always came with flowers or fruit or books, which she distributed among the children. And Bettina—in spite of her helplessness—was happier than she had been for months.

Weeks passed, and then one day a great specialist came and fitted a wonderful brace to Bettina's back so that she could walk again! And he promised that by summer she would be well!

By and by, when she grew quite strong, she went with the other children out into the hospital grounds and sat under the big elm-trees. There she learned to know the children well and to help them in many ways. She told them stories and taught those who could not walk how to play checkers and dominoes. And all the while she grew stronger and happier herself, because she was making others happier.

"Each child unearthed lovely playthings from little mounds of sand"

One day, just before the time came for her to go home—cured—her father asked her:

"How would my little daughter like to give a party to the crippled children?"

"Oh, splendid!" cried Bettina.

"I will send the yacht," said Mr. Elverson, "and as many children as can be moved will be taken aboard the 'Sea Gull' and carried to our summer place on the north shore. The doctor and several of the nurses will come, too."

It was wonderful how many of the crippled children the doctors were able to brace up, put into plaster bandages, etc., so that they could go. Only the very youngest and sickest were left behind—and the little boy who had never seen the sea was not one of these!

They had a wonderful trip up the coast in the "Sea Gull," which cast anchor off the private pier opposite Mr. Elverson's summer home. There, on the sandy beach, a number of little tents had been put up. These were furnished with cots and reclining chairs so that the children could rest when they were tired. A delicious luncheon was served by the Elverson servants, and then each child had a ride in Bettina's pony-cart.

They played in the sand, built forts and picked up sea-shells and everybody was very, very happy.

Presently the sun went down and left a rosy glow over the water.

Then, tired and hungry, they were all taken up to Mr. Elverson's house, where they had supper on the shady lawn. As dusk came on they all went back to the beach expecting to go at once aboard the "Sea Gull" and to bed. But here a surprise awaited them. Each child coming through the gate which opened upon the beach was given a spade and pail. Japanese lanterns were hung along the sea-wall and to poles stuck up in the sand, changing the beach into Wonderland!

"Children," said Mr. Elverson, "it seems that, while you were eating your supper, a wicked pirate (Captain Kidd, perhaps!) landed here on the beach, hung his lanterns and then, with the help of his followers, buried his stolen treasures in the sand. You each have a spade to dig with and a pail in which to put any treasure which you find. Let us begin!" Everybody, laughing and calling to each other, scattered in all directions and soon there were cries of, "See what I found!" as each child unearthed lovely playthings from little mounds of sand all about the beach.

It was the merriest party! and when the candles in the lanterns had sputtered out, the children were taken on board the "Sea Gull."

"Do you suppose I will ever have such a nice day again?" asked Bettina, as she and her father walked back to the house. "I call it my 'Captain Kidd Party,'" said she.

"And I," answered her father, as he kissed her good-night, "call it my thanks-offering to the crippled children; for they helped to bring back to me 'my little Sunshine.'"

Cousin Sally's Letter

DEAR GIRLS AND BOYS:—

With the coming of Thanksgiving, the holiday spirit seems to take hold of me. I love all the hustle and bustle, the excitement and good cheer of this festive season, the pleasure of preparing little surprises for loved ones and doing, oh, so many, many things to make this old world a happier and better place for one's neighbor. This year I have good cause to be thankful. And I am. Our club, which has only just passed its first anniversary, is larger than I ever dared hope it would be, and the good it has done for you boys and girls is most gratifying. It more than rewards me for the time I have given the work. It has helped my little friends in more ways than one. It has made little men of the boys and little women of the girls. The members have ever kept before them the motto of our club and are doing their utmost to keep the rules. Our club stands for truth; honor; bravery; kindness to dumb animals; loyalty, loyalty to your country, your parents and your schoolmates; kind deeds and everything that is good, traits that every good and patriotic American should have. I know that all of you boys and girls are going to grow up into fine men and women, and I'll be proud to know that this club of ours has helped accomplish this.

That you may one and all have the happiest kind of a Thanksgiving is the sincere wish of Cousin Sally.

Monthly Prize Contest

OUR prizes this month are for verses on any of the following subjects: "Baby" or "My Valentine" or "Winter Winds" or "My Thanksgiving."

Do not write more than five verses. Write in ink on one side of the paper only, with name, age and address in the upper right-hand corner. All verses entered in the contest must bear the signature of parent or guardian, to show that the work is your own. The contest closes November 28th. Address Cousin Sally, FARM AND FIRESIDE, 11 East 24th Street, New York City.

Serviceable New Clothes

Designs by Miss Gould

THE dainty white lingerie waist or the one of pretty embroidered flannel always needs some little finishing touch at the neck to make it really attractive. The pretty tie in the above illustration is most appropriate to wear with waists made of either of these materials. A strip of velvet ribbon encircles the base of the collar and in the front this strip is ornamented with short velvet tabs finished at the ends with side-plaited frills of two-inch-wide point d'esprit edging.

THE woman who uses Madison Square patterns is pretty apt to look attractive in the morning, for among these patterns are always new and smart designs for morning dresses, just suited to the needs of the woman who has much housework to do. The pattern No. 1610, Morning Dress With or Without Flounce, is cut in an unusual number of sizes, because the style is specially becoming to slender and stout figures. First, make the waist and then the skirt. After the skirt is made, join it to the belt according to notches and fasten invisibly at the left side of the front gore. This closing will come on a direct line with the waist closing and will give the effect of a princesse or one-piece dress. When the flounce is used, it is not necessary to have the skirt run all the way down underneath it; in fact, it would make the skirt too heavy and full at the bottom.

This dress can be made of many different materials. For instance, if it is to be worn for a housework dress, use percale or gingham. However, it is such an attractive design that it would also be appropriate for other occasions than morning wear. For a simple afternoon dress, develop it in poplin or soft pretty cashmere and trim with either silk braid or ribbon velvet.

This pattern is really a very economical one to buy, because its price is only ten cents and yet it can be used for the entire costume or to make two different skirts, which can be worn separately if one prefers, and a smart-looking waist.

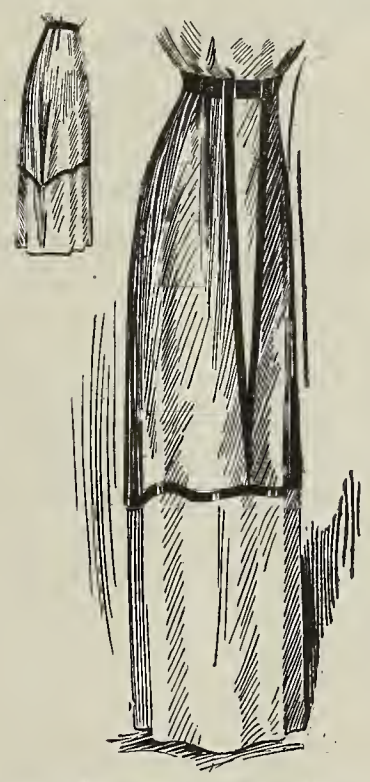
No. 1610—Morning Dress With or Without Flounce

Pattern cut for 32, 34, 36, 38, 40, 42 and 44 inch bust measures. Quantity of material required for medium size, or 38 inch bust, eight and one half yards of twenty-four-inch material, or five and one half yards of thirty-six-inch material. When the flounce is used, an additional two yards of twenty-four-inch material, or one and one eighth yards of thirty-six-inch material will be required

No. 1622—Costume Blouse With Double Sleeves

Pattern cut for 32, 34, 36, 38 and 40 inch bust measures. Quantity of material required for 36 inch bust, one and three fourths yards of thirty-six-inch material, with two yards of net and one and three eighths yards of velvet

EVERY woman needs at least one or two costume blouses to wear with her cloth suit. A very attractive design for this blouse is shown in pattern No. 1622. The blouse and upper sleeves should be of silk or marquisette in the same color as the cloth skirt. The vest and under sleeves would be attractive of cream-colored lace,



No. 1593—Circular Skirt With Banded Drapery

Pattern cut for 24, 26, 28 and 30 inch waist measures

THE draped skirt continues to be the most modish style for afternoon wear or for dressy costumes. It is a great comfort to the woman who has an old silk skirt she is very tired of, but must continue wearing. Here is an easy way of completely changing its appearance and with little expense. A few yards of voile or marquisette in the same color as the silk skirt and trimmed with folds of the silk and you have a new up-to-date skirt and the cost is almost nothing.

No. 1621—Double-Breasted Waist With Frills

Pattern cut for 32, 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium aize, or 36 inch bust, two and one fourth yards of thirty-six-inch material, with five eighths of a yard of contrasting material for frills

THE waist that is just between the fancy costume blouse and the strictly tailor-made shirt-waist is sure to be an acceptable addition to every woman's wardrobe. Made of silk, pongee or crêpe the design in pattern No. 1621 is most appropriate for this blouse. The frills may be of cream-colored point d'esprit or net.

No. 1567—Flounce Skirt With Slashed Tunic

Fattern cut for 22, 24, 26 and 28 inch waist measures

THE design shown in pattern No. 1567 is an excellent model for the woman who has a few yards of two or three different materials and not enough of each one to make an up-to-date looking skirt. As an instance, the tunic could be made of plain cloth with a piping of silk, the same that is used for the flounce. Plain silk, foulard or a stripe would be attractive for this flounce, though, of course, it should match or harmonize with the fabric of which the tunic is made.

The Style Book of Madison Square Patterns

The woman who finds the dress problem a very serious one should send for the fall and winter catalogue of Madison Square patterns. It is full of the most attractive fashions, so cleverly adapted from French styles that every design illustrated is sure to meet the many requirements of the practical American woman and her family. All orders for this catalogue, which is also a style book, should be sent to the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City. It costs but four cents, and for every design you like we can send you an easy-to-use, ten-cent paper pattern.

We have a liberal offer to make you in regard to these patterns. Here it is: We will give one Madison Square pattern if you send us only one new yearly subscription to FARM AND FIRESIDE at fifty cents. The subscription must be for some one not now a subscriber to FARM AND FIRESIDE. Send orders to the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City.

Follow these directions when ordering patterns: For ladies waists, give bust measure in inches; for skirts, give waist measure in inches; for misses and children, give age. Don't fail to mention the number of the pattern. Satisfaction is guaranteed.

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THE stock in the above illustration is the answer to the problem of the busy woman who is looking for something new in neckwear suitable for her tailored waists and which will launder easily. The collar is made of white piqué decorated at the top and bottom with narrow bands of black taffeta silk and with two tailored bows of the silk in front. These button onto the collar so that when it needs washing all one has to do is unbutton the trimming and the collar is ready for the laundry.

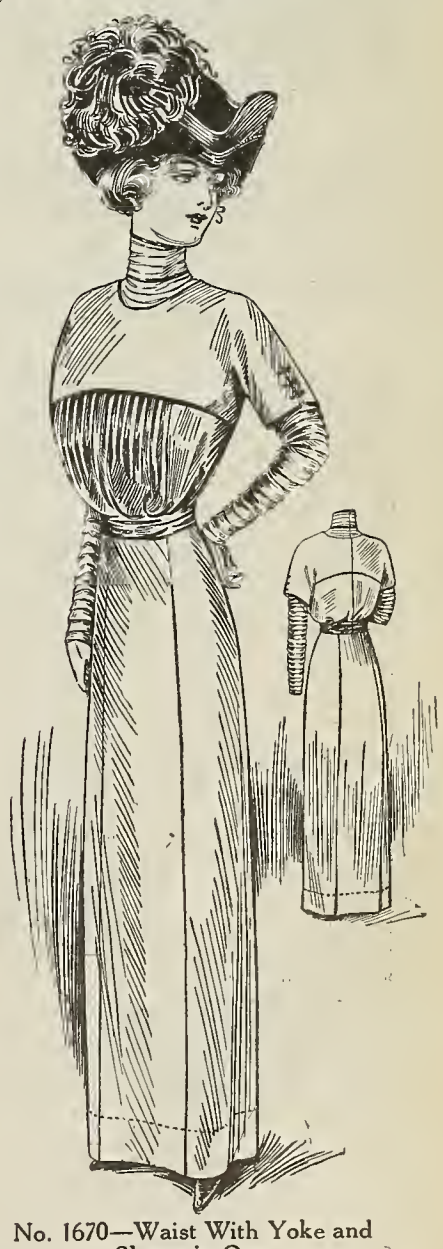
THE woman who can not have many new gowns this season will be glad to know of some of the smart-looking dress accessories which are in favor just now. These touches do help so wonderfully in making the old gown look new.

The new girdles of soft satin or silk, with long ends, are looked upon as a very smart costume touch. The ends this year must fall at the left side, rather than the front. This may seem a very slight detail, but it gives just the new effect to the dress.

Scarfs are being worn more than ever before, and any girl can easily make one for herself. They are very pretty of crêpe de chine with a hemstitched border or of net finished with a border of silk fringe. These scarfs are worn in fichu effect.

Fur, as a trimming, is the height of fashion and many a last year's costume can be quite transformed by a little fur. If fur seems too expensive, marabout will give almost as attractive an effect. Very narrow bands of marabout look well outlining revers and edging deep cuffs.

Sailor collars are being worn a great deal this season and a very new idea for renovating a tailored coat is to freshen it up with a sailor collar of very wide black silk braid. Sailor collars of fur, particularly if the fur is a flat fur, such as moleskin, are also desirable.



No. 1670—Waist With Yoke and Sleeve in One

Pattern cut for 32, 34, 36 and 38 inch bust measures. Quantity of material required for medium size, or 36 inch bust, two and five eighths yards of twenty-seven-inch material, or one and one half yards of thirty-six-inch material, with one and seven eighths yards of tucking

No. 1671—Scant Four-Gored Skirt

Pattern cut for 22, 24, 26 and 28 inch waist measures. Length of skirt all around, 41 inches. Quantity of material required for medium size, or 26 inch waist, five yards of twenty-seven-inch material, or four and one eighth yards of thirty-six-inch material

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ANNOUNCEMENT

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We want every FARM AND FIRESIDE reader to have a copy of our new catalogue. It is brimful of useful necessities, amusing games and toys, instructive books—in fact, there is something for every member of the family, young and old.

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The Worthmore Guarantee protects you absolutely. Should you, for any reason, not be perfectly satisfied with your mattress in every respect, during your two months' trial, you may return it at our expense and we will promptly return every cent you paid us without question, quibble or comment. We guarantee to please you and if we were not perfectly reliable, "Farm and Fireside" would not accept our business. So send us the measurements of your bed; attach check, postal or express money order, and we'll send your mattress same day all transportation charges prepaid. Full size mattress (4-6x6-4) costs $9.85; smaller sizes proportionate low prices. *Send for illustrated folder and tick samples.* You'll be under no obligation to buy Write name and address plainly.

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The Housewife's Letter-Box

Have you been looking for a special recipe for years? Do you need any information on household matters? And do you meet with little problems in the home that you wish some one would solve for you—some one who has had a little more experience than you? Then, why not make use of YOUR OWN department and ask the questions which have been troubling you? This department has proved that the spirit of helpfulness is abroad in the land, especially among the women of the farm. That our readers have the mutual desire to help one another is evidenced by the large and prompt response we have had to the questions which are printed here monthly. There is no payment made for contributions to these columns. All answers and inquiries should be addressed to "The Housewife's Letter-Box," care of Farm and Fireside, Springfield, Ohio.

Questions Asked

Will some one please tell me—

How to can mushrooms?
MRS. M. A. B., Pennsylvania.

How to *dry* citron (not can it) like the kind you buy to put in cakes?
C. L. L., New Jersey.

How to make pumpkin-butter?
W. R., Missouri.

How to prevent caramel from curdling?
MISS M. M. B., Kentucky.

How to clean German silver?
MRS. E. A., West Virginia.

How to mend a mirror? The quicksilver has fallen off in many places. Is there any way that I can have it resilvered? If possible, I would like to do it myself.
MRS. B, E. G., North Carolina.

Will some one please send me the pattern of the grape and tulip quilt?
N. C., Indiana.

D. T. R. of Pennsylvania would like to have a recipe for preserving ginger.

Mrs. W. B. M. of New York would appreciate a good and tested recipe for making catchup.

Mrs. N. H. of Iowa would like a recipe for wine-cake.

Will Mrs. E. J., who asked for patchwork quilt patterns, send her full name and address to editor of "Housewife's Letter-Box?"

Mrs. L. W. of New York is anxious to obtain a reliable tested recipe for making sweet pickles. Can some reader send her one that is thoroughly good, and one that will not shrivel up the pickles nor make them tough?

Questions Answered

For "An Ohio Lady"

Here is a recipe for making three loaves of white bread: Three cupfuls of water and about three quarts of flour (the amount of flour varies slightly with the brand used).

For use at night: Dissolve thoroughly one cake of compressed yeast in one cupful of lukewarm water; add one pint of water (cold in summer, lukewarm in winter) and one tablespoonful of melted lard. Stir in enough sifted flour to make a soft sponge; beat well, sift a little flour over, cover and set to rise in moderately warm place, free from draft. In the morning add one heaping teaspoonful of salt and one tablespoonful of sugar, and stir in flour until stiff enough to knead: take out on floured board and knead briskly, using sufficient flour to keep dough from sticking to board. When stiff enough to cut with knife, cut in thirds and knead until dough has a silky smoothness. The time of kneading must be twenty or twenty-five minutes. Let rise to double its bulk, mold into loaves, and when well risen bake forty or fifty minutes in moderately quick oven. The heat should be slightly reduced after fifteen minutes.

Take from pans and let cool quickly. Do not put away until cold.

Potato-water may be used, and a little mashed potato added.

If dry yeast is to be used, put the cake to soak in one half cupful of warm water in the afternoon; an hour later pour one half cupful of boiling water over two tablespoonfuls of flour, beating hard until smooth. When cool add to the yeast and beat. Keep warm, and use at night in place of dissolved compressed yeast.

I hope this recipe may also help Mrs. C. B. of Illinois. MRS. H. Q., Wisconsin.

For Miss L. W., Ohio

To remove mildew from muslin, pour one quart of boiling water on two ounces of chlorid of lime. Strain through a cloth, then add about three quarts of cold water. Let the article stand in this twelve hours; stir goods frequently, then take out and rinse thoroughly. This solution will not injure the cloth. The quantity given is enough for about five yards of goods.
MRS. J. R. E., New York.

Mrs. A. W. N. of Ohio writes that mildew spots can be removed by using lemon-juice and salt, rubbing it in well, and then laying the goods out in the sun.

For I. S., Oregon

To clean galvanized ware, rub thoroughly with kerosene, then wash well in soap-suds and scald.

To remove weed-stains from the hands, rub them well with a raw tomato before washing them. MRS. B. C. L., Ohio.

Miss M. C. B. of Michigan also writes that kerosene will clean galvanized ware, and E. F. M. of Delaware says that kerosene rubbed on the hands, before washing them, will also remove weed-stains.

For Mrs. E. C. R., Ohio

Here is a good washing fluid that will not fade the clothes or injure them in any way. Five cents' worth of borax, five cents' worth of lump ammonia, five cents' worth of salts of tartar and one can of lye. Scald all together with one quart of boiling water until dissolved, then fill up with cold water to make two gallons. To use the fluid, soak the clothes in cold water in the evening, put one cupful of the fluid in boiler, add one half bar of soap and put in the clothes and boil twenty minutes.
MRS. H. B. W., Ohio.

For Mrs. P. K., Illinois

CAULIFLOWER PICKLE—Break cauliflower in pieces and put in weak brine for twenty-four hours; then scald in enough of the brine to cover; drain and put into the mustard-sauce while hot. Bring to a boil and seal.

MUSTARD-SAUCE—Beat to a smooth paste in a little cold vinegar one cupful of sugar, one fourth of a cupful of flour, one teaspoonful of turmeric and four teaspoonfuls of mustard; stir into two quarts of hot vinegar and boil up once. MRS. H. Q., Wisconsin.

Here is another recipe for pickled cauliflower contributed by Mrs. S. T. of Michigan:

Pick the whitest and closest bunches, cut in small sprays or clusters, plunge into a kettle of scalding brine and boil three minutes. Take out and lay upon a sieve or cloth, sprinkle thickly with salt, and when dry, brush this off. Cover with cold vinegar for two days, setting jars in the sun. Then pack closely in glass or stone jars, pour over them scalding vinegar seasoned with the following: To one gallon of vinegar allow one cupful of white sugar, a dozen blades of mace, a tablespoonful of celery-seed, some bits of red pepper pods, one tablespoonful of coriander seed, one tablespoonful of whole mustard. Boil five minutes.

Repeat the scalding once a week for three weeks; tie up and set away. Keep the cauliflower under the vinegar by putting a small plate on top.

For Mrs. L. W. F., Arizona

CREAM CHEESE—Half fill a common milk-crock with good thick clabber milk. Stir well. Then pour over it boiling water till the crock is full, stirring gently all the time. Turn into a colander. Let it drain well, then press all the whey out with the hands. When cold rub fine and add a little salt and make the desired consistency with sweet cream.
MRS. C. S. F., Illinois.

For Mrs. A. H. H., Nebraska

DILL PICKLES—Pack medium-sized cucumbers, sliced onions, pieces of horse-radish root and plenty of dill in layers in cans; mix one gallon of water with one half gallon of vinegar, add bay-leaves and spices to taste, heat to boiling-point, pour over pickles and seal. MRS. H. Q., Wisconsin.

For Mrs. C. M. E., Ohio

I am sorry to say that no one has contributed the pattern of the "Sunburst" quilt block, which you are anxious to obtain. But I am still hoping that one of our many readers will have the pattern and will send it to you. EDITOR.

For I. B. C., Illinois

I wish "I. B. C." would try my way of drying beans and canning cucumbers.

For drying beans prepare as for cooking; put them on in cold water with a little salt and let boil an hour; drain and put out to dry.

For canning cucumbers, gather small ones, put a few grape-leaves in the bottom of the can. Fill can with cucumbers, sprinkle with salt, add a red pepper (or any other spices that are liked). Fill to the top, then put on another grape-leaf, drop in a small lump of alum, pour over hot vinegar and seal air-tight. MRS. L. I. E., South Carolina.

Here is another recipe for making cucumber pickles, contributed by Mrs. A. W. N. of Ohio: Soak the cucumbers in salt-water a couple of hours. If your vinegar is too sour, weaken with water and let boil a few minutes, then put in the cucumbers and let come to a boil; add mixed spices and a little sugar.

Ice-Cream Cones, for Mrs. I. J. F., Pennsylvania

One fourth of a cupful of butter, one half cupful of powdered sugar, one fourth of a cupful of milk, seven eighths of a cupful of flour and one half teaspoonful of vanilla. Cream the butter, add the sugar and cream them well together; then add the milk very slowly, and last add the flour and flavoring. Spread very thin with a broad-bladed knife on the bottom of a square or oblong tin. Bake until light brown, then cut in large squares and roll up, beginning at one corner, like a cornucopia. If the squares become too brittle to roll up, place them in the oven again to soften. The lower end must be pinched together so that the cream will not run out as it melts.

For Mrs. N. E. M., Oregon

CANNED BEANS AND PEAS—The beans should be fresh and tender. String and break the green pods into pieces about one inch in length, season and boil, the same as if preparing them for table use. When tender, pack in jars which have been rinsed out with hot water, pouring over the beans the liquor left in the vessel till the jar is full. Put one teaspoonful of hot vinegar on top of beans in each jar, seal securely and set away.

[CONTINUED ON PAGE 27]

Off the Track at Hilton

[CONTINUED FROM PAGE 18]

dropped wearily into a seat. It was not the run across the fields that had tired him. It was the weight that lay on his heart.

He drew out the *Hilton Courier* and read the fateful item through again. Naturally, when the train slowed up, he did not see the little, slim figure that climbed the steps on the first coach and disappeared.

"Hilton!"

Elijah drew back in his seat. He was not anxious to be recognized by acquaintances to-night. He had never seen so many people around the station. It seemed as if all Hilton had turned out.

Ah, that explained it!

"Freight train off the track. Three cars wrecked. Line may be cleared in a few hours. If not, passengers will be transferred to the train from Boston that will come in early in the morning."

Everybody got out, Elijah with the rest. Impatience of the delay drove him down the line to the scene of the accident. Thus it happened that he again missed the little woman who reluctantly descended upon the lighted platform.

The crowd around the station held terrors for Margaret Wynwood to-night. Her eyes turned longingly to the darkness of the downward track, and then her feet followed her gaze.

She was fretting over the delay. There would be no chance now of seeking out one of the partners to-night, as she had hoped to do. She found just one comfort. Father was spared the pain of knowing.

How could she guess that Ann Tracy had found Elijah Wynwood's paper in her mail-box, and with characteristic energy hailed a passing teamster on the highroad and promptly sent it back? How could she divine that father was even now chafing and fuming over the wreckage out yonder where the lights moved back and forth?

Elijah Wynwood had convinced himself that there would be no train to Boston that night before he came tramping back heavily. The wind blew cold, but his thoughts did not turn to the warmth of the station. He would rather brave the wind and be alone with his trouble.

Somebody had left a lighted lantern on a pile of planks by the side of the track. It showed Elijah a sheltered nook in their midst. It did more. It showed to a little woman sitting back in that nook a man's face. She drew her breath with a gasp. Father—here! How old and worn he looked. Could it be—

Then she saw a paper sticking out of a coat pocket and understood.

"Father!"

That one sobbing, pitying word told him why mother was waiting at Hilton for the train.

"I thought you didn't know," he said. "I'm going to Boston to bring him home."

"So am I."

By the light of the lantern they looked into each other's eyes. Then Margaret's hand stole into Elijah's. His fingers closed firmly over it. One arm went around her. And thus they sat waiting for daylight and the Boston train.

The day had dawned, and in the distance sounded the whistle of the train from Boston. Elijah and Margaret stood up stiffly.

"We'll be getting down the track ready," Elijah said.

But they were not half-way there when the first passenger from Boston came along. His legs were young and swift. He had not sat all night fighting a great pain.

"Charlie! It's Charlie!"

The cry was from Margaret's lips.

"Why mother—father! Where are you going so early?"

"To Boston—to get you out of jail."

"Oh, Charlie! To think they dared to do it!"

The young, fresh face for a minute showed bewilderment. Then it broke into a laugh.

"Did that story come here? I met it in a dozen places in Boston."

"Look there!"

Elijah pushed the *Hilton Courier* into the young man's hand. It was doubled so that he had not far to look.

"I'll pitch into Editor Fairleigh for this," he said. "He isn't much to blame though for getting Charlie Wyn*ward* of Hilton, New York, confounded with Charlie Wynwood of Hilton, New Hampshire. That New York Hilton is the plague of my life. Half my letters to the boys here have been sent there lately."

"And they didn't arrest you?"

Mother's voice shook.

"I guess they didn't. I didn't need to steal two hundred dollars. I've made just that keeping the books of a Boston firm in the evenings. Isn't that a pretty fair record?"

Elijah laid his hand on the young man's shoulder. The other arm was slipped around mother protectingly. Margaret's delicate face had grown very white.

"We'll set Fairleigh straight before the day's over," he said. "Let's get home now. Mother's tired."

The train they had come in, with engine reversed, was filling. They boarded it, all three together. As they stepped inside, the sun, just above the hills, shone out and sealed the gladness of a new day.

Don't miss the first instalment of our new serial, "Poor Relations," that begins in our next number. It is a story that you will not want to put aside—so absorbing is it and so brimful of exciting and breathless moments. It was written especially for Farm and Fireside by Adélaide Stedman.

The Housewife's Letter-Box

[CONTINUED FROM PAGE 26]

For Mrs. B. E. L., Ohio

I do not know of any preparation that will permanently remove superfluous hair from the face. There are any number of so-called hair-removers on the market, but in every case that I have heard of the hair grew in again in a week or so. I would prefer pulling the hair out with tweezers rather than to put any of these powerful preparations on my face, which are apt to poison the skin and make it red and irritated looking.

For R. H. G., Ohio

Is this the recipe you asked for? Cottage cheese from separated milk:

Many farm people think it impossible to make cottage cheese of separated milk, but this is a mistake. There is no need of any one forgoing this healthful food because the milk happens to be separated, when the secret is learned—and that is that the milk must not be heated. Heating the separated milk will turn the curd into a sticky mass as elastic and quite as indigestible as India rubber, and because we have always been in the habit of heating the clabber milk when making cottage cheese, one is likely to fail the first time when making it of separated milk, but when the "knack" is learned it is easily done.

In the morning take warm milk from the separator and set it in a granite vessel on the back of the range, just as far from the fire as possible, where it will keep lukewarm. If the temperature is kept right, the milk will be a thick curd by evening. Now break up the curd and move the vessel over where the whey will warm up a little, stirring it up from the bottom, but do not let it get too warm, or the cheese will be spoiled. As soon as the whey is warm, lay a thin cloth in a colander, and pour in the mixture; let it drain until it is as dry as liked, then add butter and make up into rolls. If liked moist, stir in one cupful of rich cream; and here again some like sweet cream and some sour, and my German neighbor adds a sprinkling of caraway-seed, which is always liked by the children.

E. C. H., Wisconsin.

For E. W., Indiana

You have asked how to wash a cream silk waist that is trimmed with pipings of Persian silk. Wash the waist in lukewarm water and pure white soap. Rinse twice and in the last rinse water add a tablespoonful of powdered alum to a half gallon of water. Wring out and hang on the line to dry. I have known these directions to be carried out with very successful results.

EDITOR.

A Century of Achievements

[CONTINUED FROM PAGE 22]

for their lives. The fractured or misplaced bone, or the misfortune of deformity, the deadly bullet or other foreign substance in the body has been safely adjusted or removed through its use, where a life might have been unavoidably sacrificed in blind surgery.

Scientific agriculture has lately produced much for the betterment of means and methods, of strains and varieties, of breeding and feeding, of selection and development in the growing of crops and live stock that has added materially to the farmer's income, by literally making two spears of grass grow where but one had grown before.

Agricultural and industrial education has advanced in grade, scope and accessibility to a point beyond the hope of a few years ago. The rural high school for agricultural and industrial training has been, thanks to progressive educators, fully tried in several states and found eminently practical, and they will soon be established within reach of every country boy and girl, when they may be fitted for any of the mechanical and industrial trades or taught the science and practice of agriculture without the often prohibitive expense of leaving home for a course in the colleges of agriculture and the mechanic arts, a real blessing that both child and parent will profit by and should be exceedingly thankful for.

The best gunners in the world man the batteries of our battle-ships, as proved by their world-breaking records last summer. And, also, our navy is manned by the most courageous and sturdy men that ever graced a vessel's deck and, so long as warships are in style, we should be thankful we are protected by fighters of such known bravery and efficiency on ships that are justly our Nation's pride and, too, that from the days of Paul Jones to Dewey and Schley, they have never as a fleet struck their colors to the enemy.

Blindman's Touch

IN BLINDMAN'S Touch the players are blindfolded one by one and led up to a table on which stands a tumbler filled with uncooked rice, dried peas, samp and other grains mixed together. Each boy or girl has three minutes in which to separate as many of the grains as possible. Each kind is placed in a separate heap on the table in so far as he is able. The separation and arrangement into piles is, of course all done blind fashion by the sense of touch alone, and the paucity of the results is always highly entertaining to those looking on.

The Original Lindeman Piano, direct to you from the Factory, at wholesale price. Secure one *now*, before Christmas, and begin paying afterwards.

John Wanamaker
New York

One Month's Free Trial

$220 Freight Prepaid

In 1821 in Dresden, Saxony, William Lindeman began making the Lindeman Piano, from his own scales; and it was soon recognized as "a *better* piano."

Thousands of the Lindeman Pianos are in use today, to the satisfaction of their owners. Their handsome *appearance*, their enduring *quality*, and their sweet *tone* prove that they have been wisely builded.

We have searched for a high-grade, everyway satisfactory piano to sell by Mail Orders at a low price, and we now offer

The LINDEMAN Endorsed by JOHN WANAMAKER

We knew the Lindeman to be just right as to quality, but the wholesale price had been $220, which required that the local dealer sell it at $350, or more. (Ordinarily, remember that between the factory and the home there is the Jobber, the Wholesaler, and the Local Dealer, each of whom must have a profit; to say nothing of the various storage, freight and handling charges.)

We have at last found a way to get around all these "middlemen profits": First, *we take all the pianos the factory can make.* Second, *we are content with such a small profit* that we can sell the Lindeman, with all the Lindeman *excellence*, at the former *wholesale* price, $220. We not only ship it direct to your home from the factory—*it is moved but that one time*—but we pay the freight ourselves.

200

Every possible saving is thus made for the purchaser. No jobber, no wholesaler no local dealer, no freight. The saving on this "bed-rock" offer is all yours.

To show our confidence in it: We shall allow you a free trial for a month, without any payment. At the end of that time you will know that the piano is satisfactory, or *that it is not.* If you do not want it, then simply tell us so, and we will advise you how to return it at our expense. If it is satisfactory, you either send us $220, or a small sum down and the balance monthly. *You* must be *satisfied* in this transaction, or else, "no sale." *Detach and mail coupon.*

JOHN WANAMAKER New York

John Wanamaker
New York

Please send full particulars of your offer to sell The Lindeman Piano, with Catalog.

Name .....

P. O. .....

Mayer Leading Lady

WEAR, STYLE AND QUALITY.

Shoes—leaders of women's fine footwear—style leaders and leaders for comfort and durability. Mayer Leading Lady Shoes give a trim and stylish appearance. They are satisfactory for all dress-up occasions, yet durable for general wear, and have all the qualities of refined footwear.

MAYER LEADING LADY SHOES

are made of choice leather selected for its quality, strength and suitability for fine shoes. They fit comfortably and are stylish looking. They are high grade quality shoes, yet they cost no more than ordinary shoes.

To be sure you are getting the genuine look for the Mayer Trade Mark on the sole.

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FREE—If you will send us the name of a dealer who does not handle Leading Lady Shoes, we will send you free, postpaid, a beautiful picture of Martha Washington, size 15x20.

We also make ***Honorbilt*** Shoes for Men, ***Martha Washington*** Comfort Shoes, ***Yerma*** Cushion Shoes, ***Special Merit*** School Shoes and ***Mayer Work*** Shoes.

F. MAYER BOOT & SHOE CO., *Milwaukee, Wisconsin*

AGENTS

SALESMEN MANAGERS

GENERAL AGENTS WANTED

Think of it a self-wringing mop, weighs only 3 pounds, lasts a life time, sells for only one dollar, **150 per cent profit,** one million homes waiting for an opportunity to buy. Join the merry money-makers. Biggest seller ever inveuted. **Get in line,** don't wait, write today for information and catalogue, **all free,** simply ask for it, costs you nothing. **Listen, One man's orders $2600 one month--profit $1650.** Mere boy in Pa. made $9.00 in 2 1-2 hrs. "Called at 20 homes, made 19 sales," says A. E. Martin, Mich. **"Sold 131 in 2 days.** Sold 18 first 4 1-2 hrs." says E. Menn, Wis.

$100 EVERY WEEK

So it goes. **Hundreds getting rich.** Room for you. Abundant money. Pleasant position. All or spare time. **"Canvassed 11 families took 11 orders,"** E. Randall, Minn. "Six dozen orders in 4 days," W. R. Hill, Ill.

Don't need experience. Men, women, all can sell. Great invention. The easy Wringer Mop. Biggest money-maker ever heard tell of. Stop and think, a self-wringing mop, **no aching backs,** no putting hands in dirty water, a blessing to every woman. Makes mopping a pleasure. **Two turns of crank wrings out every drop of water.** Simple, practical, reliable, durable, never wears out. **Every home buys.** No talking necessary. Sells itself. Show it, take the order. Easy money for you. **Get started now,** don't wait. **We will help you.** Can't fail. Spend one cent and let us show you our proposition. **We want an agent** in every county in the United States. Be first and secure the **valuable territory.** You lose money every day you wait. Send in your name and address at once. Write it carefully and plain so there will be no delay. **We will help you to make money** if you will only give us a chance.

NEW WAY **OLD WAY**

U. S. MOP COMPANY, 1084 Main St., LEIPSIC, O.

Farm Notes

Rye Good as Green Manure

A correspondent of Farm and Fireside, Mr. G. A. Randall of Christian County, Michigan, writes interestingly of his experience with rye as green manure. It has done wonders for some parts of the country—particularly Michigan—in making sandy land productive. It adds humus faster perhaps than any other crop one can plow down. And humus is the great lack in many lands. On such soils, rye plowed down may be better than clover. Mr. Randall says:

"Having about six acres of very poor, worn pine sand soil, which had also become foul, through continued use, the writer was at a loss what to put on it to bring it back. This land was considered too valuable to lie idle and so poor that clover would not grow upon it. I had something like forty two-horse loads of stable manure that by dint of careful handling I made go a long way toward covering lightly the bare spots and knolls. This was distributed very early in the spring so that all of the early rains leached much of its virtue into the ground, for sand readily absorbs even large rains without running off. I then plowed deep and thoroughly harrowed the surface at intervals of a week or ten days until May fifteenth, when I rowed both ways forty-two inches apart and planted to an early dent corn. This was in 1909.

"The resulting crop was very light, but I had the ground clean in the fall, not a big weed to be seen. This corn was cut so that the shock rows were quite a distance apart and the stubble very low. It was easy to harrow in with the team one and a half bushels of rye, broadcasted per acre. My continual cultivations of the corn acted as a most excellent summer fallow for the rye and the way it grew till freezing weather was astonishing. The next spring it kept on growing until when fairly in the blow I plowed it down with a jointer and chain, harrowed thoroughly as before at intervals of a few days, thus killing legions of young weeds, marked and planted in rows, in hills forty-four inches apart, only allowing three to four stalks to each hill. This was about May 15th.

"My corn this year, although it was dry during most of the growing season, bids fair to husk near the hundred mark and ripened much earlier than most of the corn in this vicinity. The fodder was rank and sturdy, with very large handsome ears and many, passing, remarked about such large corn on such light land. At this writing I have just finished sowing the same ground to rye again, and in the winter expect to top-dress lightly all over this ground with stable manure and plant to corn again next season, that to be followed by wheat or rye and seeded with mammoth clover the following spring.

"By this method I have not only rid the land of many kinds of calamity in the weed line, but have also brought the soil up even with the best of farming land in this vicinity in fertility. It has cost careful, absolutely thorough work, but the game has paid big. This land has been used continuously for the past fourteen seasons. If your land is light and poor, try the rye method a few seasons."

The editor this year wanted to put a twenty-five acre orchard in legumes; but while he was absent, the rest of the force were "scared out" by the high prices of seeds, and the field went unsown until we thought it too late. That land is now in winter rye. Next year we shall plow the rye down when it is six feet high with a two-way riding plow provided with jointers. It may be that this will do the land more good than the plan first laid out would have done.

Auto Wisdom

For farmers who have purchased 1910 cars and have trouble with carbon in motors I would suggest that it is best not to feed too much fuel or oil, as carbon may be derived from an excess of either gasolene or lubricating oil. If there is an excess of air, the tendency is to burn up the carbon. Carbon is fuel and will burn in the solid form as well as in the gaseous if there is air to combine with, and if the walls of the cylinder are not too cold.

A cylinder which gets hot so as to permit the burning of the carbon will clean itself of carbon if the mixture is made lean when maximum power is not needed. But many water-cooled cylinders do not get hot enough to permit burning off the carbon. If the walls stay quite cool, the oil may remain unburned and hold the carbon. In such an event any good solvent for oil, such as kerosene, will cut the oil and loosen the carbon and dirt. Some folks feed this into the carbureter with a squirt-can just as the engine is about to be stopped. If the engine is overhot, this may not be the best time. The walls should be warm, but not hot enough to vaporize the kerosene before it does its work. Some feed in a little water in the same way. This sizzles on the hot walls and seems to loosen up any carbon. It seems to work by its sudden expansion into steam instead of as a solvent, as does the kerosene.

Some put the kerosene into the cold engine and turn it a few times so as to splash the liquid all over the walls. The use of kerosene at the close of a run cuts the oil and leaves the engine free for easy starting next time. But it is likely to leave the walls dry and more than the right quantity of oil must be fed or there is danger of cutting at the next start-up.

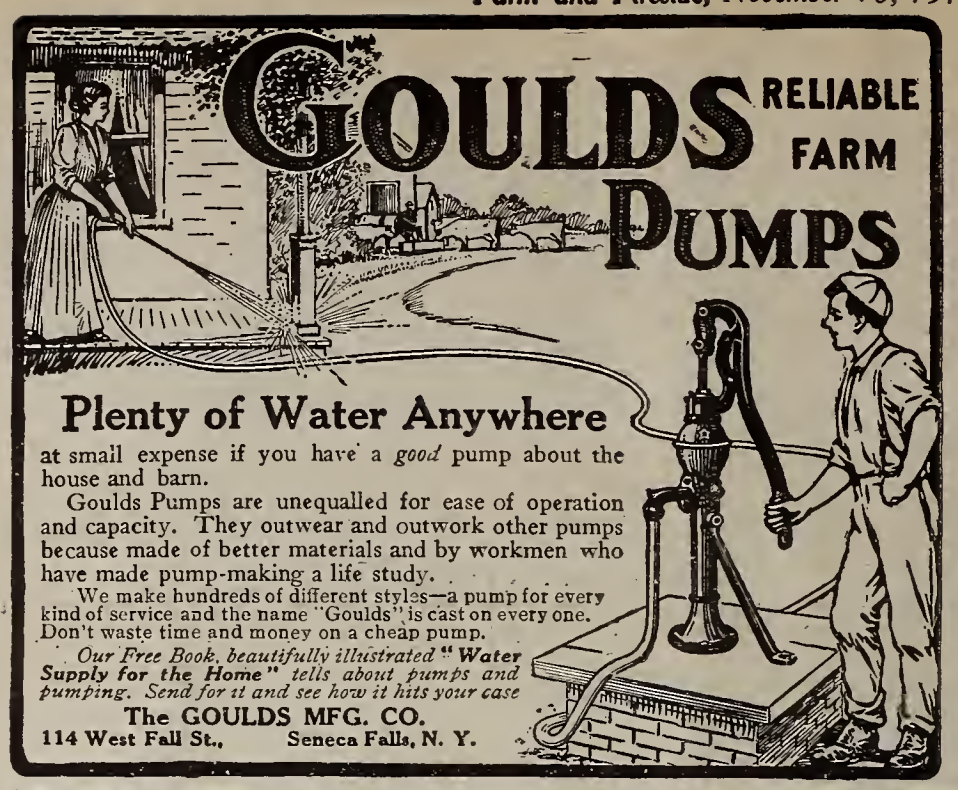
In my own practice I seldom or never use any solvent. I flush with gasolene at starting if the engine is stiff. I scrape the cylinders when they need it, for by so doing I can be sure that the spots which might not be reached by a solvent are properly cleaned.

Much of the deposit in cylinders is road dust. This is at first held on by oil, and sometimes when the oil burns out, it forms a dry brick-like dirt which I do not believe any solvent is certain to move.

Chester E. Gouveia.

Minnesota, California, North and South Dakota lead in barley production. Almost thirty-two million bushels are raised in each of the two first-named states.

Seventeen hundred acres of beans were planted this year on the San Joaquin ranch in California. Fourteen hundred acres were in Lima beans and three hundred devoted to the culture of the Blackeye variety.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Goulds Pumps are unequalled for ease of operation and capacity. They outwear and outwork other pumps because made of better materials and by workmen who have made pump-making a life study.

We make hundreds of different styles—a pump for every kind of service and the name "Goulds" is cast on every one. Don't waste time and money on a cheap pump.

Our Free Book, beautifully illustrated ***"Water Supply for the Home"*** *tells about pumps and pumping. Send for it and see how it hits your case*

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Odor Hood—Carries all steam and odors from cooking to chimney.
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Any one of these Pieces will make a Fine Christmas Gift.

IT makes no difference what kind of furniture you want, nor for what room—you can get it **best** and **for least money** at Montgomery Ward & Co.'s. Whether you live in a palace or a cottage, whether you want to furnish one room or a hotel, makes no difference to us. We are ready to supply you. We furnished Buffalo Bill's big hotel at Cody, Wyoming. We furnished the celebrated South Shore Country Club, in Chicago. We have furnished the homes of people in every state and in nearly every nation on earth. When Col. Roosevelt was in Africa he was entertained at the American Mission at Doleib Hill, Sobat River, Sudan, and there he found all the furniture and the food he ate to be from Montgomery Ward & Co.'s. (In fact, the lumber the place was built of came from our house and was laid down there at net $15.00 a thousand feet less in price than it could be bought for elsewhere.)

We tell you this so that you may fully understand that the quality of our furniture is first class, and the kind you want for your home. Another thing, we treat your order with the same uniform care whether it is for a single 65 cent kitchen chair or for an outfit for your entire dwelling. We want you to have what you want. **We guarantee satisfaction or your money back, and we guarantee safe delivery anywhere.** We employ expert furniture men as buyers and as packers. And you get the benefit. Do not buy any furniture till you see our line in our new Furniture Catalogue.

THIS CATALOGUE

Shows you how to get anything you need in Furniture just as easily as if you were to visit our store and select the goods from our stock.

HERE ARE JUST A FEW SAMPLE PRICES

Taken from our Big Furniture Catalogue which you can have free and postpaid if you will write for it:

Dining Room Chairs	$ 0.65 to $ 7.50
Dining Room Tables	5.95 to 28.00
Dressers	6.95 to 25.95
Beds	1.35 to 32.90
Rockers	1.19 to 15.50
Sideboards	9.40 to 45.95
Kitchen Cabinets	3.50 to 24.90
Morris Chairs	3.95 to 23.50
Couches	4.25 to 44.50
Parlor Suites	11.75 to 56.00
Invalid Chairs	12.65 to 55.35

We also carry a very attractive line of mirrors and pictures at remarkably low prices.

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We have just printed a new furniture, carpet and rug catalogue showing our complete lines for 1910–11. All the newest things from all the best factories and wonderfully low priced. We have a copy of this book ready to mail to you and you can't afford to buy anything in the way of furniture, carpets, rugs, lace curtains or furnishing goods of any sort until you have first written us a letter or a postal card and asked for a free copy of this book.

From its pages you can buy as satisfactorily and much more economically than if you were to visit the largest furniture stores in the great cities. Every article is fully illustrated and accurately described and with this book before you, **you can make a comparison of qualities, sizes, prices, etc.,** which will enable you to buy just what you want.

REMEMBER WE GUARANTEE OUR QUALITIES, we guarantee prompt service and that we will save you money over the usual retail prices. Send for this free catalogue today addressing us at the store nearest you. 19th and Campbell Sts., Kansas City; Chicago Ave. Bridge, Chicago.

Montgomery Ward & Co.
CHICAGO AND KANSAS CITY 122

WESTERN EDITION

FARM AND FIRESIDE

THE NATIONAL FARM PAPER

ESTABLISHED
1877

NOVEMBER 25
1910

How to Get
FARM AND FIRESIDE'S
1911 Calendar
is Told on Page 17

"Land sakes, son! What do you do with all the money your pa gives you?"

William A. Henry

F. D. Coburn

Miss Grace Margaret Gould

Dr. S. A. Knapp

Judson Welliver

Hugh G. Van Pelt

Farm and Fireside Editorial Announcement

Important Features for 1911

Farm and Fireside will continue to advance during the next year and will still further justify its claim to the title, "The National Farm Paper." Of this we assure you. To accomplish this no opportunity will be neglected, no money spared. It is this disposition toward honest endeavor that for thirty-three years has enabled Farm and Fireside to maintain its position as the most practical, cleanest, best illustrated farm journal printed. Its editorial staff has been recruited from the most capable men and women that our country affords. It will continue to be published on an especially fine quality of paper, and will be illustrated with numerous fine half-tone engravings of farm stock and farm scenes. The cover page of each issue during the ensuing year will have a picture in colors portraying scenes dear to the heart of every farm family.

Our Editorial Policy

The twenty-four cover pictures contained in a year's subscription to Farm and Fireside, alone, will constitute an adornment fit for any home. The editorial columns of Farm and Fireside will be fully worthy of the handsome appearance which distinguishes this journal from other publications. The key-note of the editorial policy of Farm and Fireside is best summed up by the statement made by our Editor Mr. Quick when he assumed charge of Farm and Fireside, "We intend to make for you, our readers, the best-possible, better-than-ever-was-seen farm paper. And we feel that it is the most interesting, the biggest and the most worth-while job which American publishing offers to-day. We hope that you folks on the farms will feel a little of the interest in the work that we feel. You see, Farm and Fireside is our farm. We are going to try and make two ideas, two inspirations, two upward impulses, two aids to better farming and better living grow where one has grown before. We shall be an 'intensive' farm paper; for we shall be greedy of space, and shall worry if a single line gets into it which shall turn out to be a weed or fail to bear a crop of benefits to our readers."

Marketing Farm Products

Each issue of Farm and Fireside during the ensuing year will contain important articles on the Marketing of Farm Products. In every industry, this problem of selling to the best advantage is considered of great importance. Large business corporations employ experts who devote their entire time and attention to the study and analysis of market conditions. Prof. H. C. Taylor, America's highest authority on the Rise and Fall of Prices, will be a contributor on this subject and will write exceedingly valuable articles on "When to Sell Hogs," "When to Sell Corn," and other similar subjects. Farm and Fireside will attack the problem of selling staple products, markets and how they vary and why, market customs, marketing for fancy trade, coöperative buying and selling, and in fine, give pointers and suggestions that will keep the farmer in the closest possible relation with the future marketing of staple products and enable him to get the highest possible price.

Here are a few of the revelations on selling that Farm and Fireside will give to readers during the coming year: "When to Sell Wheat," "Fair Milk Prices and How to Get Them," "What Constitutes the Best Price" and the like. These articles will embody the results of years of study of markets by our ablest men.

Farmers' Lobby is Effective

One of the biggest and best distinctive features of Farm and Fireside will be the Farmers' Lobby at Washington under the able management of Judson C. Welliver. All the big corporations employ representatives at Washington to look after their special interests and see that no laws are passed which are likely to operate to the detriment of their business.

In like manner Mr. Welliver has been retained as a special and exclusive representative for Farm and Fireside readers. Mr. Welliver will call the roll on good and bad measures and the men who vote on them. Your congressmen and senators will be in on our roll-call.

In each issue of Farm and Fireside Mr. Welliver will advise our readers regarding the laws which are being enacted at Washington that are of special importance to farming interests. This will make possible concerted action by the farmer in opposing measures dangerous to his interests and promoting bills that have his welfare in view. Farm and Fireside's "Farmers' Lobby" has no ax to grind—except the ax of every one of our readers. We hope you will rally to the support of this Farmers' Lobby, for, with your support, it will assert a powerful and productive influence that will tend to modify legislation to meet farm conditions.

Information Bureau

As an additional help to its readers, Farm and Fireside maintains a special staff of expert authorities to answer any and all questions on farming.

Farm and Fireside

1911 Beauty Calendar

Farm and Fireside wishes to present every subscriber with its 1911 Beauty Calendar, the handsomest calendar ever made for its readers by a farm paper.

This Calendar is 30 inches long, brass bound at top and bottom and is printed in twelve colors.

It is a truly beautiful picture, months have been spent in carefully working out every detail, so the Calendar would be as near perfection as possible.

How to get the Calendar without cost is told on page 17 of this number.

Our readers are invited to consult this department regarding any problems which may perplex them. This service is absolutely free. Information will be supplied by letter if desired, and in every instance inquiries will be referred to competent authorities.

Various Departments

Our big departments will be of interest and value not alone to special purpose farmers but also to those interested in diversified farming, as the combined departments take up practically every side of modern farming. The Live Stock and Dairy Departments contain interesting and valuable discussions, answers and contributions from such authorities as Prof. Hugh G. Van Pelt, the dairy expert; Dr. M. P. Ravenel, an authority on bovine tuberculosis. The Poultry and Horticulture Departments of Farm and Fireside contain timely and interesting articles from some of our most successful poultry raisers and fruit growers. The Gardening Department conducted by T. Greiner, will appeal particularly to those who are specializing in gardening and truck farming.

The Headwork Shop has proved to be one of the most important and popular departments in Farm and Fireside. In the columns of this department are described contrivances that are helpful to the farmer around the farm buildings. In most cases a diagram and picture of the contrivance are shown with full instructions how to make it. The description of these contrivances are contributed by our readers and they are always practical and workable. Among the new wrinkles recently described in the Headwork Shop are "How to Make a Farmer's Forge," "A Hog Ringing Stanchion," and "A Handy Post Puller." During the next year, Farm and Fireside will print hundreds of these handy hints for labor-saving contrivances, any one of which will be worth a good deal of money to the farmer who makes use of it.

Prominent Writers

During the next year some of the most prominent authorities on agriculture will contribute special articles to Farm and Fireside. Prof. W. A. Henry, the well-known authority on feeds and feeding, expects to go to Europe for us and will make exclusively for us a special study of parcels post systems, of which Farm and Fireside is a strong advocate. F. D. Coburn, of Kansas, the great authority on mid-western farming, swine husbandry and alfalfa, will contribute timely articles on these subjects. Hugh G. Van Pelt the dairy expert, will answer questions and write articles on his specialty. Dr. S. A. Knapp of the Farm Demonstration Bureau of the United States Department of Agriculture, will write intensely interesting articles on the various results developed by his department. Doctor Knapp is to-day doing work on 150,000 demonstration farms where facts regarding farm crops are actually and practically working out. The inspiring story of his work will be of interest to every farmer, North, East, South or West. This will be a big feature. The best writers, writers whose acquaintance our readers have already made in the columns of Farm and Fireside, will continue their contributions.

For the Women and Children

The Fireside pages will, of themselves, form a delightful magazine, full of household information, good literature and hints on housekeeping that will be a source of interest and pleasure to every housewife, and to each member of the family. These pages will contain interesting short stories, exciting romances and high-class serial stories. Grace Margaret Gould, America's foremost fashion writer, conducts the Fashion Department which keeps the housewife informed regarding the prevailing fashions. This department contains patterns and advice regarding the clothes to wear and how to cut and make the garments; recipes are given, and matters of etiquette and social usage are discussed at length. The Girls' and Children's Pages will be brighter and more interesting than ever, and the stories will be even more instructive, if possible. Puzzles, puzzle pictures and games will be provided especially for the little folks. Facts, fable and fiction will be contributed to Farm and Fireside by writers of national prominence.

The Housewife's Club contains hundreds of recipes for making all sorts of things and is written by Farm and Fireside's women folks. This Department is full of valuable information as is "The Household"—the department of helps and home contrivances. The Sunday Reading columns next year will be very interesting and helpful to our readers. Sam Loyd, the most famous puzzle man in the world, contributes by paid contract to Farm and Fireside. Sam Loyd's new puzzles will appear in Farm and Fireside and will be lots of fun to work out. You can earn cash prizes by solving these puzzles.

Our Great Serial Story

The great serial story of the year begins in this number of Farm and Fireside. It is entitled "Poor Relations" and is by the celebrated novelist Adelaide Stedman. You will be delighted with the illustrations for "Poor Relations." They are the most classy illustrations ever put into a farm paper and were made by the well-known artist Herman Pfeifer, who draws regularly for Woman's Home Companion. "Poor Relations" will continue in Farm and Fireside for several months, and will give a lot of pleasure to all your folks.

The Best Farm Paper

Don't forget that Farm and Fireside is published twice every month and that you will receive twenty-four complete numbers during the year. A year ago we spent $60,000 in improving the paper on which Farm and Fireside is printed, and the press on which the paper is printed, and in getting better editorial matter. It has paid. Our readers have appreciated getting the best farm paper published. Next year, we shall spend more money, and we promise that Farm and Fireside will be bigger and better than ever.

See Important Subscription Announcement on Page 17

WESTERN EDITION

ESTABLISHED 1877
The Illustrated Farm and Family Journal

24 NUMBERS
50 CENTS

FARM AND FIRESIDE

Vol. XXXIV. No. 4 — Springfield, Ohio, November 25, 1910 — PUBLISHED SEMI-MONTHLY

The Most Pressing Needs of American Farmers

By John Pickering Ross

"A bulletin of the Department of Agriculture tells of the great increase in productivity of farm lands that may be insured by intelligent rotation of crops. No subject of greater importance to the farmer is likely to be written about in this year of grace."

"Failure of the farmers to keep up the production of cereals as fast as the growth in population was given as the reason for prevailing high prices of food products by E. Pfarrius, a grain exporter of New York, at the closing session of the North American Grain Exchanges."

"There is nothing that will destroy the productiveness and value of a farm so fast and so certainly as running it to grain, and shipping the grain to market instead of feeding it on the ground."

THE last of these three extracts is taken from a published statement of F. C. Pomeroy of Holton, Kansas, a well-known farmer and feeder. The first two are from the Kansas City Star. The constant appearance of articles to the like effect in newspapers and periodicals all over the country would seem to imply that the American farmer is not likely to run short of matter for serious consideration just now.

Two other symptoms of trouble which he has to face are to be found in the growing distaste for farm life and the consequent crowding to the cities of the younger generation of our rural population and the incessant cry for a chance to work of the willing and able-bodied among the laboring people. These correlated difficulties, for his own good as well as for that of the country at large, it behooves the American farmer immediately and most strenuously to try to find means to overcome.

Passing over, for the present, the question of the need for the growth of more cereals, and the fact that proper rotation of crops must be made a leading factor not only in producing such increase, but in maintaining the fertility of the soil, I propose, first, to discover the causes of the ever-growing distaste for the life of the farm shown so commonly by those of the present generation who were born and brought up in it.

In contrast to this condition, it is a fact that, in most of the older countries, the majority of those similarly situated have a marked distaste for any other mode of life. From the days of Abraham, passing by Adam and Eve, who were only gardeners, the joys of the farm and of pastoral life have been the favorite theme of the poets. From "the little plowboy who whistles o'er the lea," to the sturdy form of John Bull, whom painters have used to figure as the typical farmer of the rubicund face and well-rounded figure, and even to our own pioneer ancestor, who had to plow his barely cleared piece of primeval forest with his rifle always within reach, the tiller of the soil has always been held to have the firmest hold on happiness and content. Yet now, when the American farmer, and especially he of the middle and far West, is proverbially well-to-do, he is not nearly as happy as he should be. He has, to use a very expressive colloquialism, "a kick coming." And it is a kick with a good cause, though I believe that, in considerable measure, the conditions which inspire the kick arise from a blind adherence to old habits and ideas the discarding of which would help him to the cure of the most pressing of his present troubles.

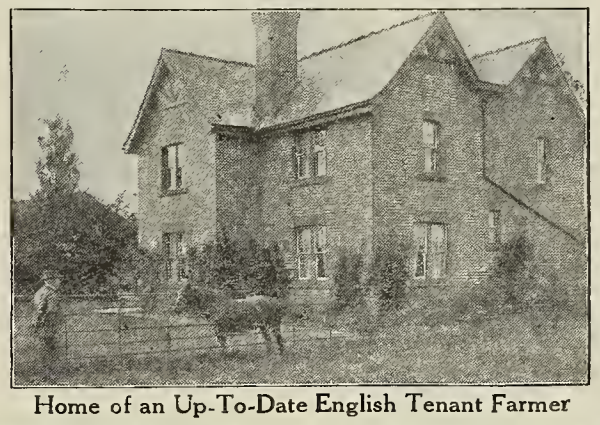
And this trouble is real. It concerns what is, and should be, man's dearest interest—the family and home life. Why do we constantly hear of the hard, laborious life not only of the farmer and his sons, but of that of his wife and daughters? How comes it that the commercial schools of the cities are overrun with girls from the country, sometimes unable even to spell, seeking to be converted into stenographers, or to be enabled to fill even the worst-paid office position? Or that almost every business man can tell of the farmer boys who have asked him for almost any job that would give them a start in the city, and enable them to quit the hated life of the farm. Of course, there are many whose "lives have fallen in pleasant places," who do not dislike the farm. These are they whose labors have been lightened by a fair share of pleasure and of change; whose parents have been wise enough to see that their children need some of the enjoyments and amenities of life, as well as its labors, and who have cared more for their happiness than the swelling of the balance at the bank. But it is to be feared that these wise ones are in a minority, for the majority have themselves spent laborious lives, and, being somewhat circumscribed in their outlook on this fast growing world, think that what has been good enough for them in a past day and generation must surely be good enough for the children.

Believing that this state of affairs is very harmful to the individual, the family and the state, that it exists more widely than is generally understood but that a remedy is easily to be found by those who seek for it and will apply it, I propose, as truthfully and as shortly as I know how, to describe the modes of life and the methods of business of a class who, with less means than even our "only fairly off" farmers enjoy, and handicapped with far heavier liabilities, yet contrived to lead lives free from laborious work, and to make their homes centers of comfort, and, as a rule, so attractive that to their fortunate families there was truly "no place like home." I shall then try to show how the American farmer can now, perhaps for the first time, make his own home even more attractive than these, add largely to the productiveness of his land, and, at the same time, do his full share of finding employment for a worthy class of skilled agricultural laborers, mostly English, Scotch or German, who, having come here to better their position, are driven instead to wander over the country seeking odd jobs until they eventually fall back into the cities, where their special knowledge is lost, both to themselves and to the country of their adoption.

Before venturing to offer suggestions as to the conduct of their business and their modes of living to men who have given such ample proofs of their determination and ability to do the best for both, so far as their knowledge extends, it seems desirable to explain the nature and extent of the experience which the writer can bring to bear on the subject.

My father was for thirty years chief agent to an English government commission which managed, in the public interest, large landed estates in every section of the country. The farms were all under his control. He selected the tenants, settled the amount of the rents and the terms and duration of the leases, attended to the condition of the farm houses and buildings, and saw that such a proper rotation of crops and general system of farming should be observed as would prevent deterioration of the land. Under his management the farms became, by general admission, among the best in the country, after having been for generations a by-word for poverty and neglect. From my eighteenth to my thirtieth year I acted as his secretary and assistant, traveling with him from county to county, ordering, under his directions, and superintending the repairs of old and the erection of new buildings, draining, road-making and all the details belonging to the business. In addition to this a farm was carried on, intended to be a model of what we now call "intensive" agriculture.

On the "Home Farm"—the Manager's House



Home of an Up-To-Date English Tenant Farmer

"The farm houses were mostly roomy old granges, often very picturesque"

For the last forty years I have lived in America, farming a little, traveling a great deal, living mostly in farming communities in Illinois and Kansas, going much among the farmers, and—must it be confessed—groaning greatly over their want of economy and system in the management of their farms and home surroundings.

From about the year 1854 up to 1864, the period in which I was thus occupied in England, the farmers were enjoying great prosperity. Prices of all kinds of produce and of live stock were generally remunerative, and often very high. Steam was largely superseding horse power; reaping, mowing and threshing machines were taking the places of the scythe, the sickle and the flail. Scientific specialists were applying chemistry to the uses of agriculture. The great land owners were waking up to the fact that tenants of intelligence and capital could be secured for their farms only by a liberal policy with regard to rents, buildings, draining and other charges properly falling on the landlord.

A superior class of men, too, were taking the place of the old peasant farmers of small holdings which were being thrown together into large farms. Moreover, steam, inventions in machinery and the opening of the markets of the world had enriched a host of commercial men, manufacturers, bankers, brewers and the like whose ambition it was to become great land owners, for the sake of the social standing and political importance which such ownership carries with it in England and in Europe generally. These men, having invested in land more for honor and glory than for the money returns, were content to let their farms to safe men at rents which rarely netted more than two and a half to three and a half per cent. on their cost.

The old English yeoman of song and story had about died out. He was tempted to sell, of course, by the high prices of land. He recognized, too, that he could realize a much larger capital than was required for his rather obsolete way of farming by selling his one hundred to five hundred acres of land, and making it a part of the bargain that he should rent it for the remainder of his life at from five to ten dollars a year per acre,

[CONCLUDED ON PAGE 16]

On the Side

How Some Subscribers Make Spare Hours and Odd Corners Pay Cash

Hominy Far From Its Home

"Lye hominy, ten cents a quart," was the call that caused me to turn and look at a funny little wagon, being pulled along the street of a very new town in Washington State. I was stopping at the best hotel. But there was no hominy on the table. So I decided to cuy some and take it to the back door and ask the cook to fry it in the old-fashioned way of the South.

The flavor of that hominy set the nostrils of the boarders and commercial travelers to working. For they detected something that had the smell of home. When dinner came I had to divide the kernels of that quart of lye hominy, for the people would not be satisfied with simply smelling it in the kitchen or on the table.

Next day I bought four quarts of lye hominy. But I had a time locating the man who made it. He was out in the country, across a river, in another state.

As I soon guessed, he came from Kentucky. He had purchased a small tract of irrigated land and planted it to flint corn. Natives told him it would not mature. But that only made him more stubborn, and caused him to cultivate the crop more than ordinary.

When the corn was ripe it was cut and put in shocks, the same as down South. Then it was left to dry and cure to perfection before being husked. After drying in the sun for a few days it was ready for shelling.

The man had bought his place on time, and now had to market the crop to get money to pay bills. The shelled corn was boiled and scalded in lye-water, after the old style, except that the lye did not come direct from the ash-hopper, but was bought in cans, from the grocer. One bushel of corn made more than fifty quarts of hominy. Some varieties might make double or three times the number of quarts to the bushel. Then it was put in buckets or jars and sold on the streets. That man made trips three days in the week. What he had left over, if that ever happened, was either thrown away or fed to the chickens. He made a living and paid for the home.

Lye hominy might not be such a money-maker everywhere, but I think there is a good hint here for people, especially in our newer regions, who might make a business of supplying home things to people far from home. JOEL SHOMAKER.

A New Brunswicker's Pin-Money

I am a farmer's wife living on the beautiful St. John River, in the Province of New Brunswick, Canada, a few miles from the capital and much farther from St. John, the winter port of Canada. Every spring I go to both towns and take orders from private parties for jams, jellies, pickles, sauces, syrups and home-made wine, and am busy all the summer from the last of June until November putting up the fruits as they come, the quince being the latest. Then packing and shipping takes some time. I have some years sent off over sixty boxes about the size of the case liquor is packed in.

It means hard and steady work all summer, but it also means ready cash, and years when, owing to too much or too little rain, the farm crops are light, it means many comforts that otherwise we would have to do without.

I began by soliciting orders from wealthy ladies, promising them good value for their money—a good article and good weight and measure. I have kept my word and in consequence still have patrons that I have had for twenty years. Some of the same people are also butter customers, paying twenty-five cents per pound the year around, and at that I can not supply the demand. The butter is shipped to both cities in earthen jars, protected by a splint case—an invention of my own.

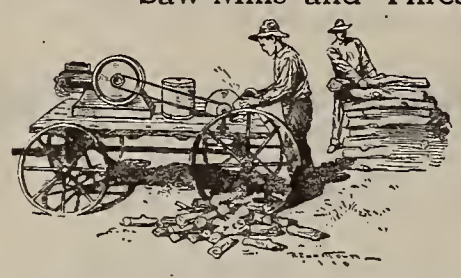
Housewives ordering jams, jellies, pickles, etc., generally send their own pint jars (self-sealers) and jelly glasses; if not, I furnish them and charge for the pints eighty-four cents per dozen and fifty cents per dozen for the jelly-glasses, which are half-pint size. I charge fifteen cents per glass for jellies. The jams and marmalades, at twenty-five cents per pound, are orange, plum, pumpkin, English cherry, quince, peach and plum tomato; at twenty cents per pound, apple marmalade, raspberry, blueberry, strawberry, rhubarb. A pint jar will hold one and one half pounds if the jam is thick, with little syrup. But those with more syrup, such as peach, plum tomato, quince, etc., weigh one and one fourth pounds. I also have on my list several kinds of pickles and syrups, such as raspberry-vinegar at forty cents per bottle and red currant shrub at forty-five cents, also spiced fruits, French mustard and chutney.

If women living on farms not too far away from a town or city have the health, the desire and some help, there are scores of side-lines that can be utilized. I firmly believe that it is more creditable to make a good pure article of food and sell it than to do mediocre work as a teacher, for instance. And the latter in many instances takes a woman from her home, which the former does not. V. M. B.

These letters from farm readers were solicited by us early last summer during our investigation of new or overlooked sources of income on the farm. Some of these letters suggested topics that are embodied—along with two hundred and fifty odd others—in the book which grew out of that investigation—"Farm By-Products." We put considerable store by these letters, because they come right from the farm and are the fruit of actual experience. We should like to get more of them. If any of our readers have had success with other side-lines, will they not let us know about it?

EDITOR.

Saw-Mills and Threshers



In this section of Southern Virginia nearly all farmers use their teams for hauling wood, when not needed in farm operations. As we are located near a large city (Richmond) the demand for wood sawed in short lengths is considerable, and this fact in 1904 led me to invest in a gasolene-engine and saw, which I mounted on an old discarded wagon with low metal wheels. I used this at first for sawing my own wood for home use and for sale. Then I began sawing for neighbors and small wood-yards in the city, and soon had all the work I could do without neglecting my farm. The sawing is not extraordinarily profitable, yet it brings me enough so that I can be constantly bettering my buildings or buying more commercial fertilizers, lime and drain-tile. I lay it to these improvements that the farm now produces about double what it did five years ago.

About four years ago I decided a small threshing-machine would save me considerable in threshing my own grain and peanuts, using the same engine that I used for sawing wood. My experience with the threshing-machine was like that with the sawing outfit, my services being sought a little more each year, until my trade now requires two gasolene-engines and more men on the farm.

Last fall I bought a small saw-mill to be operated with light power and small crew, and just finished last week cutting several thousand feet. This is the cheapest and most satisfactory method of getting a supply of lumber for home use, if one has the timber, and there are chances to expand the business.

I am still running the wood-wagon, selling sawed wood direct to city consumers, same wagon bringing back a load of manure occasionally. We have the advantage of good roads. I bought both of my engines and separator unmounted and did all the mounting myself to suit conditions. The threshing would be too slow for large crops, such as are harvested in the West, but it fits the crops and roads here all right. Engine and separator are all on one truck and on good roads two horses can pull it. It threshes about two hundred bushels of wheat a day. H. E. SMITH.

Flowers From an Ohio Farm

Although flowers are not generally considered as money-makers, yet in the proper hands they can be persuaded to yield quite an income.

Two ladies of my acquaintance, when their father died, wished to remain at home with their mother. Previous to this they had followed occupations which kept them away from home. They had a small farm and a boy attended to the farm work.

The young ladies tried selling flowers, such as grew in their door-yard and garden. They arranged them into small bouquets, took them to the small city near by and left them at the different book-stores every Saturday morning, just to see if they would sell.

At first they did not go very fast, and some spoiled for want of buyers. But week after week the sales increased until they could not supply the demand without setting out more plants. In the autumn they planted bulbs and set out roots of perennials and shrubs. They also began keeping winter-blooming plants in their sunny windows and ferns in such as were shady. In this way they were able to furnish flowers on special orders for weddings, etc., cheaper than they could be obtained at the greenhouses.

In after years they had a pond constructed in which they planted a great variety of hardy water-lilies and other aquatic plants. What was begun as a means of earning a little spending-money soon became a permanent side line, furnishing them more than they could have earned by their former occupations, besides giving them the opportunity to remain at home and attend to household duties. Little expense was necessary to start, it was pleasant work, and they never lacked for company, for the city people, after the business became well known, came often to see and to buy their flowers. MRS. C. C. S.

A Broom Factory on an Ohio Farm

Three years ago we were farming in the old-fashioned way—large acreage and large expense and barely a living income. Realizing the need of some side issue, we bought a hand outfit for making brooms, and I worked with a careful broom-maker until I could make a fair broom. That winter we bought the broom-corn by the bale, that being our greatest expense and leaving us comparatively a small profit. The next spring we decided to try raising our own corn. By careful inquiry we learned all we could about the culture of broom-corn. Experience has since taught us that aside from curing the brush in the fall it was no harder to raise broom-corn than common field corn. The curing of the brush needs careful study and strict attention at just the right time, which we found to be while the brush is still green and seed is not yet ripe. A beginner should get a book and read up on this or consult some old grower. We did both and had fine success. The first year we raised corn that was nearly self-working, on clay land, and it was quite so the next year, so that our profit was nearly doubled. My wife learned to sew the brooms and the two little boys six and nine do a great deal of the sorting. Indeed, all the work is done by our own family, and so I do not need to farm so heavily, the spare time and rainy days being the most paying days, instead of lost time. Often we make three dozen brooms a day or half a dozen in an evening, and so long as brooms stay at present prices—four to five dollars a dozen—I know of no better "side-line" we could adopt in connection with farming on a small farm. Poultry like the seed, and that, too, is no small source of profit with eggs at twenty cents a dozen and all kinds of grain at high prices.

Here is the system of cultivation we use with success. Prepare the ground as for corn or sorghum-cane, mark one way, drill very thin, one or two stalks to six inches in row. "Tennessee Evergreen" is a good variety. Cultivate to keep clean and crust broken after heavy showers.

To cure the brush break the stalks of two rows at a time two feet from ground, bending them inward and crossing them to form a table, on which you lay the brush after cutting it from the stalk. Leave about six inches below the brush. We use a large, sharp knife and cut before frost while seed is in the milk. Collect an armful or handful at a time, being careful to keep heads all one way, and lay in bunches on the table. Leave three or four days unless rain threatens. Keep it from getting wet.

Take the bunches from the table, and place in rows, tier on tier, on your hay-rack.

The drying is done in shed or barn on open racks. A handy way to make these is to have cleats on the ends of shed, poles between. As fast as you fill a layer, lay boards on the next pair of cleats above, and make another layer on that. Never lay brush on green wood—it will blacken the brush. The layers must not be over two inches deep.

When the brush is quite dry put it through the seeder—an instrument with revolving cylinders bearing teeth. Tie in small bunches and watch the centers to prevent mildew. Open if necessary and lay in wind, not in sun.

Make a plain, serviceable broom and try to sell in the country first, giving discount on sales of a dozen, half dozen or quarter dozen brooms. Soon a call will come from your own and other groceries and from individuals. Near-by towns will soon have heard good reports of your work, if you make a good article, and you will do well to call there with samples or a load of brooms. H. H. MURPHY.

Some Side-Line Crops in Nebraska

Two years ago we farmed a forty that had been planted to sorghum-cane a year or two before, and cane same up thick in our corn. We cultivated, hoed and pulled, but there were still many stalks with fine black heads at husking time.

We did not want this seed on the ground next year, so we made shoulder bags to hold a bushel and went through the corn, cutting each head with a sharp knife and dropping it in the bag. The whole lot was spread to dry on a shed floor. Two of us worked three days and got three wagon-loads, which we hauled to the machine. It threshed out sixty-six bushels of good quality, which brought one dollar and twenty-five cents per bushel—all from something we thought a nuisance. Very little cane came up the next year.

One year we planted a corner patch to early sweet corn, and after using the ears, cut the fodder for the pigs. It was all cut by August 9th, the ground was plowed and buckwheat sown and harrowed in. This was mowed with a scythe, bunched and dried, then threshed with a home-made flail. The patch netted eight dollars in buckwheat alone, and we and the pigs had enjoyed the corn. P. M. JOURNEY.

* * *

Kicking requires as much energy as pulling.

Who lends to everybody has trouble without borrowing.

Maybe the world owes you a living, but you are likely to have to hustle to collect it

The Railroads as Boosters for Agriculture

Demonstration Trains are a Business Investment—By John T. Bramhall

FEW people realize the dependence of the railroads upon the farmer, and to what extent the former is affected by the prosperity or adversity of the latter. For the railroads not only carry the farmers' crops, but they carry the manufactures to the farmers, and to all the people with whom the farmers trade, and they carry the people who do business with the farmer, and who profit by the farmers' business, and they carry the farmers themselves. It needs no lengthy argument therefore to show that the prosperity of the farms means the prosperity of all business, and the prosperity of the railroads, and were it possible to imagine such a thing as a general failure of crops, through some great convulsion of Nature, we should find the railroads, with their million and a half of men, thrown out of business. On the other hand, if we imagine our crops greatly increased, we may confidently look for extended railroad construction, more business in every department of industry, largely increased traffic, and perhaps—let us be optimistic—reduced rates.

"A Capacity House" at a Demonstration Train Lecture

Altogether, the railroads haul something like two hundred million tons of agricultural produce. The average haul, I believe, is about four hundred miles—probably more, since the greater part of this produce is bound from the central agricultural states to the seaboard. Figured at eight tenths of a cent per ton mile (the average revenue per ton mile for all freight in 1907 was .759 cents) this would bring the railroads a revenue of $640,000,000. And twice this amount of traffic would be worth $1,280,000,000. I am not using exact figures, understand, but these are approximate, I believe, and are sufficiently correct to indicate the importance to the railroads of the agricultural traffic. And the fact that the cost of railroad operation is steadily increasing makes clear the necessity of increasing the traffic, since it is only in the big movement of freight, if I may use the phrase, that any considerable profit will result. We understand then, that the farmers, directly or indirectly, are the railroads' principal patrons; that the charge for hauling is sufficiently low to be unprofitable unless a large tonnage is handled, and that it is therefore vital to the railroads to increase this traffic.

This is the meaning of the "Corn Train," the "Good Roads Train," the "Educational Special," etc., which various railroads are sending out into the agricultural sections of the country to promote larger crops, better crops, diversified farming, and in a general way the improvement of agriculture. The bigger the crops, the more business for the railroads. For example: The average wheat crop in Ohio fell from 14.4 bushels in the decade ending 1895, to 13.8 bushels in the decade ending 1905. The acreage is about two million. If, instead of the decreased yield, the average had been increased in the same proportion, the difference would have been something over two million bushels of wheat a year. In the same period the decrease in the average yield of corn was six bushels, and had this been changed to an increase, the difference would have been forty-two million bushels a year. And the railroads' share would have been the freight revenue for hauling the increase to market. Obviously, it is the interest of the railroads to induce the farmers to raise larger crops.

The railroads of the West have been engaged in the propaganda of increased production for some years. James J. Hill, of the Great Northern, was one of the first to recognize this inter-relationship of the railroads and the farmer, and to take active measures to aid the latter to increase his products. He talked to farmers' organizations, to commercial bodies and to the press, on the importance of raising more and better wheat, on improving the roads, so as to reduce the excessive cost of domestic transportation, on the importance of live stock; and he even sent blooded bulls ("steers," according to a recent article in *Outing*), among the farmers along his lines, to the intense amusement of the foolish and the great profit of the wise. I have no doubt that his accountants can report to-day just how many carloads of the produce of those bulls his roads carried last year, and possibly they can tell how much more money they brought the farmers than the scrub stock they used to raise.

The Rock Island was one of the first of the great railway systems to send out a "Corn Special," an instruction train, with lecturers from the Iowa or other state agricultural colleges preaching the gospel of seed-breeding and of better selection and cultivation of the great grain crop of the middle West. The road maintains a well-equipped agricultural and dairy department, and through the Southwest they send a car fitted up with a supply of samples, farm implements, literature, etc., in care of a trained expert, and in coöperation with the state agricultural bureaus, to advocate diversification and to give instruction in a better and more profitable agriculture. The railroads, in fact, bring the federal department of agriculture and the state agricultural college to the farmer, and by demonstrating the practicality of both, and the economical value of their teachings reconcile the conservatism of the one to the applied science of the other. Through the Rock Island territory the path of the instruction train may be seen, marked by alfalfa and cow-peas, by taller corn and whiter cotton, by more abundant fruit and more numerous and better stock.

In the South, the Illinois Central and the Southern Railway have carried on the instruction work, with the result that the agriculture of whole counties has been revolutionized, the land advancing in value from a few dollars an acre to a hundred dollars and more. What is still better, the idea of agricultural education has received an impetus and popular support which means much for the future.

In the East, no road has equaled the methodical and effective work of the Pennsylvania, in its lecture courses at the farmers' institutes, participation in county and state fairs, coöperation with state and national agricultural departments and with the agricultural colleges, and in its experimental farms which have been inaugurated with success on Long Island and are to be extended next year to the Delaware-Maryland peninsula. The Long Island experimental farms in the three or four years they have been established have not only taken scores of prizes at the county fairs, but they have built up the fairs themselves.

As this educational work is followed up, in the East and West, North and South, in all parts of the country—aiding the farmer everywhere by coöperating in every improvement in agriculture, in the dairy and in the orchard, introducing new seed and standard breeds of stock, settling the country and building prosperous homes and increasing the value of the land—it is impossible to estimate either the hundreds of millions added to the farmer's wealth or to the general improvement in his social condition. It means much to the railroads—that is why they are doing it—but it means more, in the long run, to the farmers reached by the campaign.

Hundreds of Acres and Scores of Crops

What One Man Does on a Florida Farm—By Ella M. Rogers

NEAR Arcadia in De Soto County lives a famous Florida farmer, Mr. C. C. Pearce. A man of medium height, spare, with blue eyes, prominent nose, gray hair, a naturally fair skin bronzed by long exposure to sun and winds, plainly dressed, fluent in speech, but using always his native Florida vernacular, assuming no airs, but content to wear the manner as well as the garb of a tiller of the soil—he is a character to be remembered.

During some eighteen years of his earlier life Mr. Pearce was a telegraph operator. About twenty-five years ago he bought the eighty acres on which he still lives. A part of it was improved and it had an orange-grove on it. He gave his predecessor five hundred dollars for the improvements and paid the government a dollar an acre for the land. From time to time he has added to his original purchase until now he owns twelve hundred and fifty acres.

Picking-Time in Mr. Pearce's Orange-Grove

He keeps about thirty sheep, as many Angora goats, sixty or seventy head of cattle, ten horses besides his work horses, and says he ought to have several hundred hogs. But some of his neighbors are unable to resist the temptation offered by nice fat hogs running in the woods, so his herd of swine has dwindled.

The narrow confines of his twelve hundred acres hardly allow range enough for Mr. Pearce's stock, so he leases a tract running through a whole township and on this keeps most of his animals. But on his own land he has what he calls a "little pasture," a small affair containing only two hundred and seventy-five acres, in which he turns any sick, maimed or decrepit animals. During the winter these are fed all the hay they will eat and some corn and other grain. In the section of Florida where he lives snow is unknown and even frost is rare.

Mr. Pearce when a boy left home barefooted, and neither he nor his wife ever has obtained a dollar by inheritance. But he has prospered beyond the lot of most farmers in Florida or elsewhere; indeed, he says it would take a hundred thousand dollars to "move" him. Whether an actual tender of a less amount might influence him to sell, it would be hard to say. But since his land includes nine forties on which he says he can dig up phosphate with a post-hole digger, surely he would not part with his possessions for a song. Finding phosphate on a farm in Florida is like striking oil elsewhere.

Mr. Pearce tills only a small piece of land, less than twenty-five acres, and more than two thirds of this is orange-grove. On just a few acres he raises so great a variety of farm products and vegetables that it would be hard to duplicate his layout in all Florida.

He makes a practice of attending the state fair held at Tampa and more than once he has succeeded in carrying off the two-hundred-dollar premium offered for "the largest and best collective exhibit of citrus fruits, agricultural and horticultural products, vegetables, cereals and preserved products from one farm."

The exhibit he made at the last fair, held in February and March, occupied a space about thirty-five by fifty feet. One long table was covered with fresh vegetables, including cabbages, three kinds of squash (one mammoth specimen weighing one hundred and three pounds), Indian pumpkins, peppers, egg-plants, string beans, turnips, onions, kohl-rabies, radishes, carrots, Bahama yams, ruta-bagas, collards, mustard, Irish potatoes, sweet potatoes—in short, a fine collection of garden truck, which, next to the fruit, is the most valuable midwinter harvest of southern Florida.

He made a good showing of meats raised and prepared on the farm, including dried beef, kid's ham, salted and cured, sides and hams of pork, and links of home-made sausage. Near the meats were displays of Indian corn, crab-grass hay, guinea-grass hay, sorghum, sugar-cane and okra nineteen feet high.

Mr. Pearce had twenty stalks of cotton, which, so far as the writer observed, was the only cotton on the stalk shown at the fair. He is not a cotton-grower and was frank to say that there is not a bale of cotton produced in his whole county, but he raised this small amount simply to capture the premium of twenty-five dollars offered for the best ten stalks of short-staple cotton.

One table which must not be omitted in this description contained a large number of miscellaneous products, among which may be mentioned neat's-foot oil, charcoal, syrup and sugar from Japanese cane, pineapple vinegar and pickled tripe—all made on this farm.

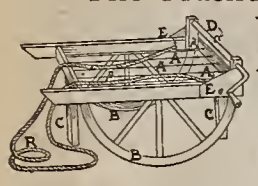
Mr. Pearce had a very good display of oranges and grape-fruit, but, of all his varied exhibits that in which he seemed to take most pride was the pyramid of canned and preserved fruits and vegetables, constituting some seventy-five separate entries, the result of his wife's skill and industry.

So strenuous had been the good lady's efforts to get things prepared to send to the fair that she was too "run down" to attend. Mr. Pearce himself was badly exhausted, but declared he was going "if he had to be shipped." The coming of this farmer to the fair must have been a ponderous undertaking, something to be likened to the journeyings of the patriarchs of old. Indeed, it might seem that Mr. Pearce had rather the harder time of it, for, while the Bible heroes had their flocks and herds as well as their wives and children to look after, it is not recorded that any of them moved about over the country with jellies and canned fruits, fresh fruits and vegetables.

Farm and Fireside's Headwork Shop

A Department of Short Cuts, New Wrinkles and Knacks

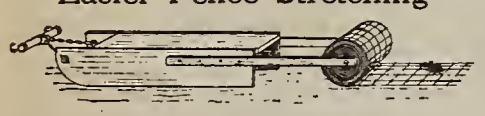
The Husker's Helper



I HAVE used this husking-table with great satisfaction the last three years. I found as I grew old that when I came to getting down to husking corn in the old way, it gave me cramps in my legs, so that I could no longer do it. Now I can stand up and husk more corn in a day than I could in the old way. I took a four-and-one-half-foot rim from an old buggy and set the halves of it (BB) up as diagramed, three feet apart. Two strips five feet long and six inches wide made the sides of the framework and the two end pieces were three feet long, six inches wide. Then I bored small holes in the end pieces and stretched five No. 9 wires (AAAAA) the long way of the frame. Then I hinged legs (CC) at both ends so that the frame can be tipped at either end.

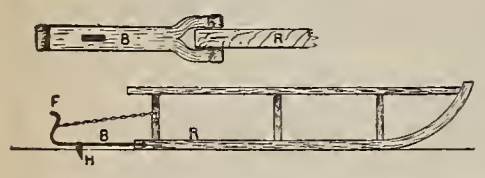
That is all that is necessary if the corn is cut with a binder, as the bundles can be easily laid on the platform, but when the corn is cut and shocked the old way, I used a windlass (D) to roll the shock right onto the platform, without any straining or lifting or tearing the shock in pieces. The windlass is fast to the end of the frame, and has a hook to catch in the double of the rope (R). The double of the rope is laid on the ground, the shock is tipped across it, and the double of the rope is then carried back around the shock to the hook on the roller. As soon as the rope begins to tighten, the table tilts down and makes an inclined plane, and when the shock is drawn up a little way the table automatically rights itself. The ends of the rope are put through holes (EE) in the frame and knotted. ISAAC V. ADAIR.

Easier Fence Stretching



TO SAVE time and a lot of hard work in unrolling woven-wire fence, use a sled six feet long by four wide and eight or ten inches high. Bolt a two-by-four to each side at the rear, extending back about four feet. Make a hole in each two-by-four near the end—or put on large screw-eyes. Put a piece of gas-pipe through the roll of fence and the hole in two-by-fours, fasten wire to post and drive away. You can carry eighty rods of fence, stretcher, staples, hammer, etc., on the sled and put up one third more fence in a day. W. C. HOWDLE.

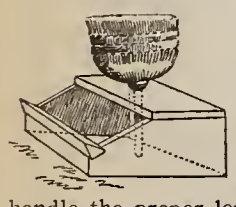
Brake for Sled



BY BEARING down with the foot on foot-rest the hook will run in the ground and hold a sled on a hill. Make the brake-bar (B) about eighteen inches long, hook (H) six inches long. Stand on brake and it will do the work. Weld the hook on strongly and chain brake up out of the way when not in use. The diagram shows brake attached to runner (R) and above an enlarged top view of brake showing how it is attached.

H. N. KERR.

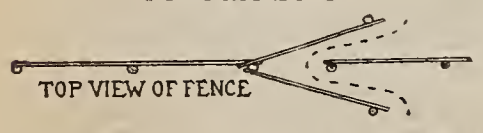
Foot Sweeper



TAKE an old broom that has been thrown aside and with a sharp knife cut the brush end down to about four inches from the stitching. Make a box the shape shown and cut off broom-handle the proper length to reach bottom of box through holes bored in top and bottom of box. A small wire nail "toe-nailed" into handle at either top or bottom will hold it in place. The triangular piece at front of box serves as a mud scraper. The mud drops inside. The back of box is open, which makes it easy to empty when it has accumulated a bunch of real estate. The brush can be replaced as soon as it wears out. Make one of these and see to it that all persons with muddy shoes use it. It is a friend to mother and saves her sweeping.

R. A. GALLIHER.

A Gate-Stile



THIS gate is never left open, yet always open to foot-passengers. The diagram shows the construction as seen from above. A cow or horse can not make the turn to get through. This is very handy where you have to go through the cow or horse lot to the spring or feed-place. Dotted line shows how one goes through the fence. G. W. C.

"We Like the Headwork Shop"

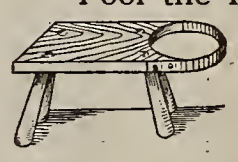
THE above sentence, or a variation of it, has been the burden of scores of letters from subscribers, not to mention the kind comments that have come in on almost every Headwork voting postal. It is mightily gratifying for us to know we have provided something that suits and serves our friends, FARM AND FIRESIDE'S subscribers, for we measure our success by the satisfaction of our readers.

Their approval of this feature is a cue to us to furnish more of it. Incidentally we have such a line-up of excellent, practical too-good-to-send-back contributions, waiting for a chance at space in this department, that it has become doubly desirable to build an addition onto the Headwork Shop.

Therefore, throughout the coming winter this department will appear in every issue—twice a month and better than ever. Three five-dollar prizes will be awarded by post-card vote of our readers, for the three best "kinks" each time.

Each subscriber is entitled to vote for his choice of the three best Headwork ideas, or any member of the subscriber's family can send the vote, provided no one else in the family is voting. Be a Headwork Citizen! EDITOR.

Fool the Kicking Cow



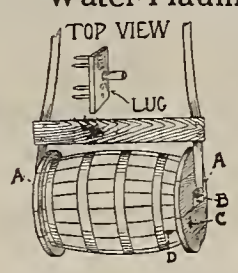
MAKE a stool the same old way, only make it longer and cut a semi-circle out of it to fit pail. Use strap iron to complete the circle or a round iron made for the purpose. H. N. KERR.

Care of Cuttings

AFTER cuttings of currants, gooseberries or grapes are taken off tie them neatly in bundles of one or two hundred having the lower or rooting ends all one way and very even. Dig a trench below danger of freezing and in some protected location. Set the bundles in upright with lower ends upward. Cover securely with soil and before severe freezing put a good coat of straw over the soil.

As spring approaches remove straw and let sun have access to soil. By time for planting the cuttings will be nicely calloused and ready for business. The growth from such cuttings will be much stronger than from the ordinary cuttings taken off in the spring. J. H. HAYNES.

Water-Hauling Made Easy

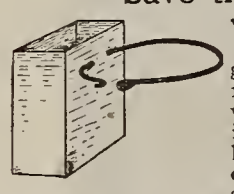


HERE is a readily made water-hauler and land-roller. Take a tight kerosene-barrel and nail boards onto the end pieces to fill them out flush with the ends of the staves. Then onto this "filling" nail two big wooden disks or wheels (AA) of same circumference as the barrel is at the point of its biggest girth. Two-inch matched flooring is good for these "wheels." At the center of both ends fasten "lugs" (B), shaped as shown enlarged above the barrel in the diagram, and fasten a pair of shafts to these lugs. You can raise a platform over barrel to sit on if desired. Leave a hole (C), that can be plugged, in one end. The barrel can be filled by driving into a pond or stream. If filled at a pump, a hole in side (D) may be handier.

When water is hauled to the house the contrivance should be run onto a platform as you can not otherwise get a pail under it. I have found this barrel handy in rolling because the weight can be adjusted by the amount of water. Or you can make a double roller with two barrels.

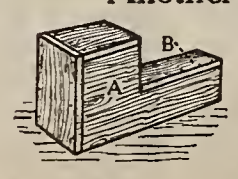
JOSEPH CHATTAWAY.

Save the Worms



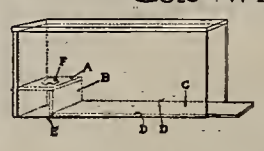
WHEN digging potatoes or working the garden how often we see fat grubs, bugs and worms escape because it is always a bother to keep a bucket or can close by. It takes but a second to pick up the creature, but it is a nuisance to have to throw or carry him to his prison. If we save all such creatures, what a feast we have for the hens and how much less vermin to infest our land. This is how I manage it. Take a small tin box (a common half-pound cocoa box is just right) and near the top edge punch two small holes an inch apart and run a piece of hay wire through them, to hold the box against the outer side of the right leg just below the knee. Make the part around the back of the leg about twice as long as the part around the front. Make a hook on the front end and a loop on the other. Or, use a small strap buckled around the leg. This never interferes with your walking or working. A. W. MILLER.

Another Milk-Stool



THIS is a very handy milk-stool for children and grown-ups. One keeps the pail on the board B. Cut two boards to shape of A for sides. Put them about one foot apart and nail three other boards on, one for a seat, one for rest for pail and one on the end which serves as brace. M. P. K.

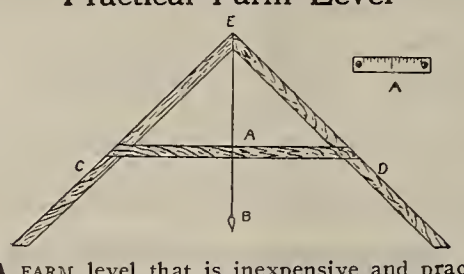
Gets Wily Rats



TAKE a substantial box about ten inches wide, twelve inches high and two feet long, with no top, and turn it open side down. Remove one end, and fit a shelf (A) across the other end about four inches from the bottom, with an apron (B) extending down to within half an inch of the bottom; this to be covered with tin so a rat can not get a hold on it. Now make a light, loose bottom (C), covered with tin, long enough to reach from the shelf to a point four or five inches outside the box and just wide enough to swing clear, inside. Pivot this on small nails driven through two small staples (DD), one close to each edge and as near the center lengthwise as possible, so that the bottom when left to itself will hang level with its inner end up against the shelf apron, while a small weight placed on this end will swing it downward and slide off, the bottom returning to its former position. Make a small hole (E) through side of box near the bottom just ahead of the apron so you can stick a nail through under the tilting bottom and hold it up.

Set the trap over a barrel with water in it, in a place where the rats can get to it. Fasten up the tilting bottom. Set bait (F) on the shelf and keep it filled several days until the rats visit it regularly. Then some night pull out the nail that is holding up the bottom and next morning you should have the whole bunch. I have caught veteran rats, that knew all about steel traps, with this device. H. A. B.

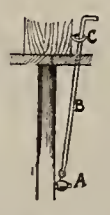
Practical Farm Level



A FARM level that is inexpensive and practical is a thing seldom seen. I will try to give you an idea of how I made one. I took two strips of one-by-two-and-one-half, seven feet long, sawed them off at an angle of forty-five degrees, nailed the ends together just like the rafters of a house. I nailed across them a piece of the same material about six feet long as in the diagram (C to D). I hung a plumb-bob (B) from the point E so the bob swung six or eight inches from the ground. I then fastened a piece of iron (A) about three inches long and one and one half inches wide on the crosspiece (C-D) as near the middle as possible. Placing the "feet" perfectly level, I made a mark with a file on the piece of iron just even with the string of the plumb-bob. When the string hangs at that mark, it is level. If you want to give your ditches one half inch fall to every ten feet, just let one of the "feet" down one half inch and make a mark on the iron where the string hangs.

JOSEPH T. HORNSBY.

Pump Kink

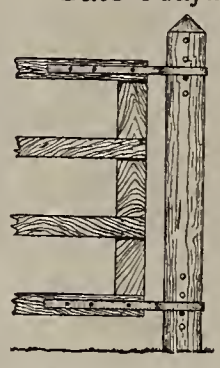


OF COURSE, you keep a leak in the pipe below your pump this freezing weather so the water will drain down and not stand in the pipe and freeze. That's necessary, but you have to do lots of extra pumping when a warm day comes. Try my plan. Get an air-cock (A), three-eighths-inch pipe size, having a T handle. Drill a one-eighth-inch hole through this handle. Enlarge the leak hole in the pipe until you can screw the cock into it. Take a one-fourth-inch iron rod (B), long enough to reach from the air-cock to six inches above the platform, flatten end of rod and drill a hole corresponding to the one in the air-cock handle. Bend other end of rod at right angles making a two-inch handle. Put a large screw-eye (C) into the side of the pump, just above the platform (if the pump is wood cased). Put your rod through this; bolt it to the handle of the air-cock. In freezing weather leave cock open, but when a warm spell comes on, give your rod a quarter-turn. S. M. H.

Changing Barrels to Tubs

KEROSENE or lard barrels can be gotten very cheaply at grocery-stores. Find the middle of the barrel and pull a tape tight around the barrel so that one edge of it is just an inch below the middle. Run a pencil along the tape around barrel. Then draw a line around in the same way one inch above the middle of the barrel, making a two-inch space between the two lines. Saw along these lines. As shown in the illustration, two staves can be left uncut on either side for handles, being careful to leave the staves directly opposite each other. B. GRADY SHULER.

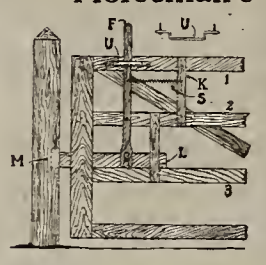
Gate Adjustable to Snow



IN WINTER I've often had to dig snow in order to get a gate open. I got tired of that and had two strong strap irons bent to fit around the post. I bolted these to the gate as shown and bored some one-inch holes near bottom and top of post, at equal distances apart. By this scheme one can raise the gate up above the snow and hold it there by inserting the pegs in the proper holes. This gate is also handy where we want to let hogs run from one pasture to another while larger stock are kept in only one of the pastures.

WM. BOND.

Horseman's Gate-Latch



THIS can be put on any swing gate. Lever F is a one-by-three slat shaved down to two inches wide, except at the lower end. A notch is sawed in the end about three inches deep and one inch wide, which works over a half-inch peg through latch L. About even with the center of gate-slat 2 bore a hole in F and put in a bolt on which F works easily. On the top gate-slat (1) nail a piece of "cotton tie" or other light strap iron (U) so that F will work under it easily. Take a one-by-two or one-by-three slat and nail it on 1 and 2 far enough from F so that spring (S) will be moderately tight when gate is latched. Use a screen-door spring.

Any one riding horseback can quickly open and shut this latch again without dismounting. It is impossible for the wind to blow this kind of latch loose and horses can not get it open. It is preferable for gate to open both ways and latch to catch in a mortise in post (M). ED STOKER.

A Seed-Corn Observation

A MICHIGAN subscriber vouches for the following. He writes: "I always choose the top ear from a stalk bearing two or more ears and after doing so for the third or fourth time I have been successful in growing four to six ears on at least half the stalks in the field."

A Roofer's Kink

FOR holding a staging I had the blacksmith make some irons shaped as shown. The thin flat end slips up in under a course of shingles and the prongs at the lower end prevent the bracket from slipping down. JOHN UPTON.

A Safe Safe

IT IS not a good plan habitually to keep large sums of money about a farm home, but I think it is a good idea to have a safe place to keep papers and other valuables if necessary.

In making my new home about three years ago I had this in mind, and therefore tried to provide a place safe from fire, secure from meddling persons at all times and fairly safe from burglars. This end I think I attained by imbedding a cheap and rather light iron safe I had in the concrete cellar steps, which I mixed and cast all at one time in an immense block. The door of the safe faces into the cellar and is all of it that shows. Being so deeply imbedded there is no danger whatever of it being hauled off by thieves, as has sometimes been done with larger safes. There has been no trouble with dampness in the safe. Cement is said to thoroughly protect iron from rust, so unless it is wrecked by explosives I do not doubt the safe will be doing duty where I placed it hundreds of years from now. PAUL R. STRAIN.

The Headwork Shop is one of FARM AND FIRESIDE'S many improvements during the two years I have taken it.—John Finger, Morrison, Tennessee.

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Farm Notes

Gardening at Eighty-One

If it should happen at any time of the year between crocuses and chrysanthemums that you should glide over Racine, a pretty little village in southeastern Ohio, it would interest you to alight and spend an hour at the home of Mrs. Martha Petrel. Just ease down your air steed on the broad lawn and walk up to the front door and knock. You will be as welcome as a ray of sunshine in midwinter. At least, you will feel that way about it before you drop the gracious hand she extends to you.

"The Petrel home carries all the charms of a prosperous rural home . . . all made possible on ten acres"

Within five minutes you will feel that you have met the sweetest little grandmother in all the world, your own excepted, of course, and in five minutes more you will forget that she is a grandmother because of her cheerfulness, light-heartedness and quickness of step.

When I visited her one pleasant midsummer morning I found her out among her flowers gently tipping their faces upward and smiling at them. "Flowers?" she asked in response to a question. "Oh, dear me, yes. We could not think of trying to do without flowers. We have them every hour from the time crocuses make their appearance in the spring until the frosts cut down the chrysanthemums, and we have had them right along for forty-eight years. I am eighty-one and every year I live I like flowers better."

In our windings we had again come to the front yard. "Do you see that beautiful maple in the corner?" she asked, pointing to a towering and shapely shade-tree. "Well, it has a story. One of our sons was about to go West and he went out into the woods and selected two little maples and planted them in the corner of the lot. I stood by as he tenderly packed the earth about the roots. When he had finished he stood up, tall, broad and manly, and taking my face between his hands and kissing me, he said: 'Let them grow until I come back, mother, and see how big they get.' Poor boy, he was brought back in six years, but both of the trees lived.

"In the course of time it became necessary for one of the trees to be removed. Husband and I went out to make the selection of the one to be sacrificed for the good of the other. It was almost like a funeral. The trees were so nearly alike that it was a long time before we could decide which to remove. Finally, however, we made the selection and you see the one we left—a monument to our good and kind son.

"When we came here this ground was so poor that it would not grow anything. Now look at it," spreading out her hands in a way to indicate that she was taking in all of the flowers and the vegetables. "It will grow anything."

Just then the remaining son of a large family came up and she smilingly turned me over to his intelligent care. "Earl will show you the vegetable-garden," said she, "and tell you how we make a living from four acres of land."

"Mother and sister Mollie mostly look after the flowers now," said he, "but still mother has not yet given up her interest in the vegetable department. There is hardly a day that she is not out hoeing and making herself generally useful. She enjoys it and it is good for her health. I still depend on her to plan and help along with her advice in the matter of rotating crops and preparing our products for the market. The little patting and coddling she gives the baskets make them more attractive. Scarcely ever a basket goes out that does not bear a bouquet or a sprig of flowers."

The Petrels own ten acres of land, four of which are devoted to vegetable gardening and the remainder to pasture land and flowers. From this ten acres a fine country home is sustained with comfort, plenty and independence. The four acres under cultivation are devoted entirely to vegetables, which are carried to the county-seat, ten miles away, by trolley. They succeed in having a little the earliest, a little the best and a little the nicest selections offered in the market, with the result that they have no trouble in selling and get the best prices.

A large family has gone out from the Petrel home, fitted for the business of the world—educated men and refined women—all from that rolling, well-tilled ten acres among the hills, while others on adjoining tracts of fifty and one hundred acres can hardly make enough to sustain themselves and pay their taxes.

The Petrel home carries all the charms and pleasures of a prosperous rural home—swings and lawn chairs, flowers, shade and fruits—all made possible on ten acres.

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We don't—and we never will. We'd rather make one-tenth the profit we might make and have our forty-five thousand dealers selling "Ball-Band" goods to 8,000,000 satisfied customers. When we have to cut expense we do it somewhere else than in the manufacturing. Our sales expense, for instance, is only one-fifth that of some manufacturers. Go to your dealer today and ask for "Ball-Band" boots or arctics. Look at them closely for the **RED** "Ball-Band" trademark. Chances are he has them. But if he hasn't, write us, mentioning his name, and we will see that you are fitted.

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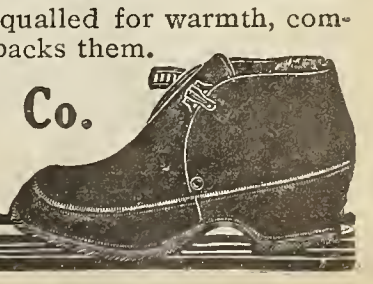

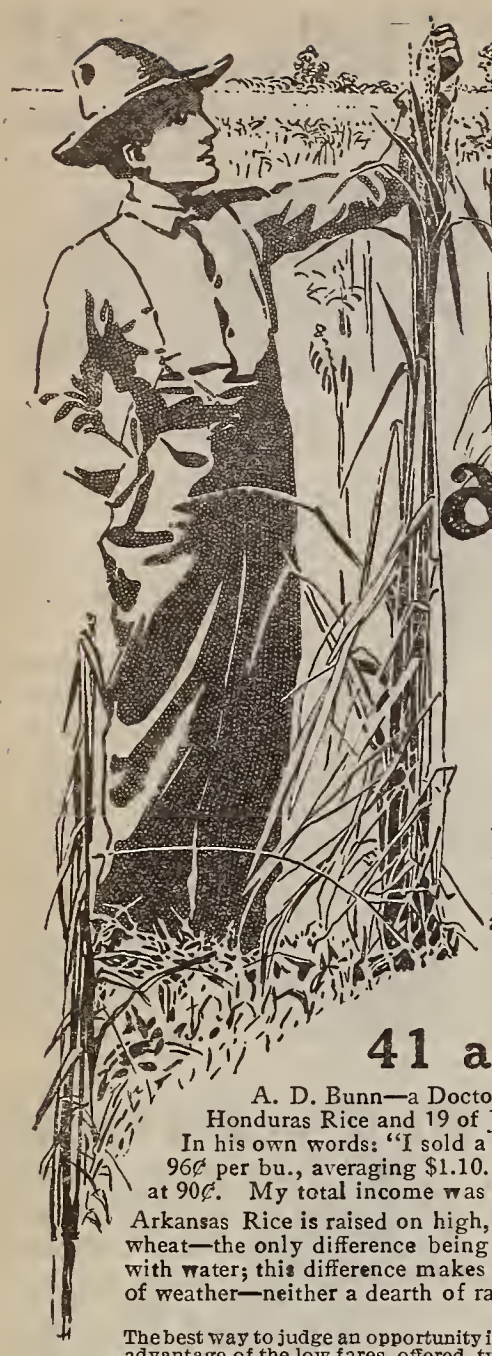

as high as a man's head

and thicker than wheat—that's the way rice grows on the Grand Prairie of Arkansas. From a single stool a dozen stalks will spring, each bearing a plump head of grain. One seed planted in the soft earth multiplies three and four hundred times. One acre of rice there produces more bushels and more money than *four acres of wheat* elsewhere. Men who never grew rice before in their lives—have gone down there and now are making fortunes in

Arkansas Rice

41 acres makes $3,936

A. D. Bunn—a Doctor of Stuttgart—last year planted 22 acres of Honduras Rice and 19 of Japan. The Honduras made 81 bu. to the acre. In his own words: "I sold a part of this for seed at $1.25 and the rest at 96¢ per bu., averaging $1.10. The Japan made 114 bu. an acre, which sold at 90¢. My total income was $96 per acre from the 41 acres."

Arkansas Rice is raised on high, healthful land, by the same method used for wheat—the only difference being that for a part of the time the land is flooded with water; this difference makes it the *surest* staple crop, for you are *independent* of weather—neither a dearth of rain nor a deluge can effect your yield.

The best way to judge an opportunity is to look into it yourself. Take advantage of the low fares offered twice each month via Cotton Belt Route to *go down there*. Nothing that you can read will *convince* you as will the things you'll *see* when you get there. Land values have almost *doubled* since last year but in the *newer* districts you can still buy good land at a price that the *first year's* crop will *pay* for.

"The Rise of Rice" tells you everything that can be told in a booklet—gets to the bottom of things. Brimful of facts and chuckful of pictures—interesting from first to last. Write for *your* free copy today.

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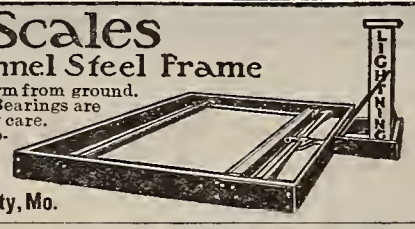
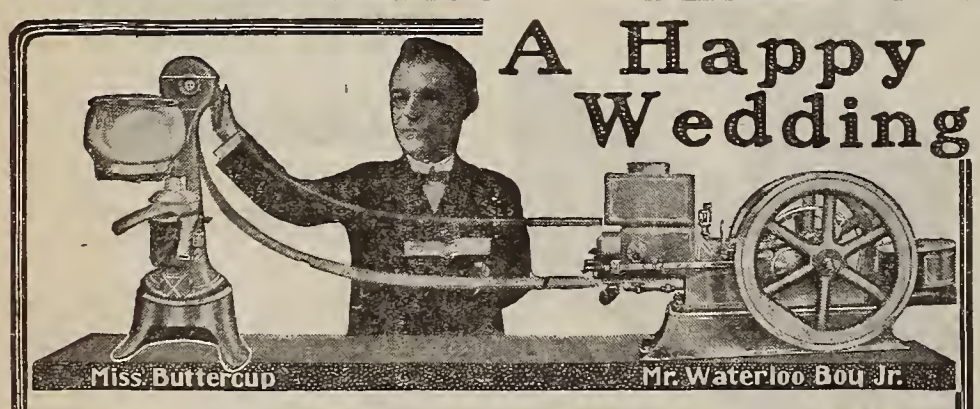


KANSAS CITY HAY PRESS CO., 124 Mill St., Kansas City, Mo.

A Happy Wedding



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A Cream Separator that in simplicity, skimming ability and durability is unsurpassed, and a Gasoline Engine so simple that a child can run it, so reliable that it can be depended upon in the coldest weather as well as in the hottest. No fancy stunts, just 100 per cent quality.

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WATERLOO GASOLINE ENGINE CO.,
173 West Third Ave., WATERLOO, IOWA.

Fruit-Growing

From Thicket to Orchard

HERE is the story of the restoration of a run-down fruit-farm. It comes from a farmer's wife in Virginia, who, after reading the stories of abandoned farms published in FARM AND FIRESIDE last summer, thought that her own experience might have interest. The novel method of spraying described is, of course, limited in its application to steep side-hill farms, but as an example of ingenious adaptation of methods to conditions it is well worth considering. Our subscriber's letter follows:

In the late fall of 1909 we bought a small farm lying in Franklin County, Virginia, containing between thirty-five and forty acres of worn-out, washed-out, grown-up land. One could scarcely tell where parts of the orchard lay, on account of the heavy growth of sassafras and locust bushes. The house, a good comfortable seven-room dwelling, was about the only object that appealed to our eye. However, we went to work. My husband began by cutting bushes, grubbing stumps and filling up ditches, some washed out deeper than he was tall. In a heavy locust thicket which he cleaned up he had, last summer, a good average piece of wheat; on another there was a splendid piece of corn. There is now a drove of seventy-five sheep grazing down a hillside orchard that was almost completely grown up with locusts.

However, the main thing, the fruit crop, which has never before been of very much value because of inattention, is in a splendid condition. Mr. C. worked up the soil in good shape around the trees, pulling the dirt to the lower sides, as it had always been thrown on the upper sides, and thus made the trees lean too much. Then in the early spring he began pruning the trees, and, verily, it seemed to me some times that there would be no tree left. Some of the trees were so grown up with "water-sprouts" that he had to cut his way in to the trunk.

When the pruning was finished, he began spraying, the first time with lime-sulphur, next with arsenate of lead and last with a mixture of lime, arsenate of lead and blue-stone. The orchard is now in a splendid condition, and the apples are as fine as ever grew, being perfectly smooth and almost entirely free from scab, codling-moths or any of the pests which often ruin entire crops in this vicinity.

This apple crop is the eye-opener for the entire neighborhood. A neighbor, who has been a fruit-grower all his life, remarked last week, after seeing the great difference in the fruit, that he "wished he had let his entire corn crop go and had sprayed his apples. That it would have paid him." Before this he has never had a deal of faith in spraying, and his crop this year is almost a total failure on account of scab, although he has a splendid pippin orchard.

Mr. C. used the following system of spraying: A good spring is located on a hillside about one thousand feet above the lowest part of the orchard, most of the orchard being below this spring. Iron pipes have been laid in different directions all through the orchard. A cement tank, holding about one thousand gallons, was built just below the spring, and the water is conveyed into this tank by a large pipe, and cut off whenever it is necessary. The solution is mixed and put in the tank, then, as needed, allowed to run out of the tank into a main line, and from the main line into whichever branch line it is needed. A long hose is attached to the branch line nearest the portion of orchard to be sprayed, and the work is done thoroughly and rapidly and the difficulties of hauling a pumping outfit on the steep slope are all avoided. Three men are required, one at the tank to keep the solution agitated and let the mixture into the main line, or cut it off; another to cut off the supply from the branch line into the hose and one man to do the actual spraying. Our apple crop at this writing is estimated at fully fifteen hundred bushels of first-grade apples.

Early last summer, after having put the place in shape, we sold out for twenty-five hundred dollars, making a profit of nine hundred dollars, having paid sixteen hundred dollars for it. MRS. C.

Roots for Winter Pie-Plant

IN A previous article on this subject (October 10th FARM AND FIRESIDE) we spoke in a general way of the dark-forcing method, but chiefly by comparison with the open field system. It has been suggested that we supplement that article by some specific directions for planting.

The roots can be plowed out in the fall, even after snow has covered the ground to the depth of six inches or more, provided the ground is not yet sufficiently frozen to interfere with the plowing. The roots are thus left to thoroughly freeze with all the snow and soil that will adhere. After this the balls of earth are smoothed and evened off with a spade.

The most convenient cellar as to shape is oblong, say 16 feet in width by any desired length, which will allow beds six feet wide on either side of the cellar and a four-foot alley in the center for convenience in picking. As the roots make no growth during the forcing process it makes no difference as to what the cellar bottom is, brick, stone, cement, plank or simply earth.

Set the roots snugly together in beds, leaving only an occasional passage-way to avoid tramping the bed. Fill in the little spaces between the clumps or roots with any good garden loam, and it is well, though not essential, to cover the whole surface an inch or more deep.

Very little leaf is grown in the dark forcing, and that of the brightest lemon color. In that forced in the light, in field or greenhouse, the leaf force is all wasted, while in the dark-forced the strength of the root all, or nearly all, goes into stalk production, and it is proven by actual demonstration that often twice the amount can be grown in the dark. On many of the stalks no leaf at all opens out, just a small cone of brightest color. Thus the profits of dark forcing are much greater than that of growing in the greenhouse or the open field.

We have spoken chiefly from the commercial viewpoint, but to demonstrate how cheaply every home may be supplied with this delicacy the entire winter through we give a view of our own house cellar with

Rhubarb Grown in the Home Cellar
From a photograph by Mr. Morse

the lamp and lantern used in the bed for heating. The globe and chimney were smoked to subdue the light, for even too much lamp-light will induce green leaf growth, which is to be avoided.

Rhubarb may be forced to perfection in a box or frame placed in the kitchen. When roots become exhausted they may be replaced by fresh ones, previously dug and stored in some cold place.

Just when the stalks are coming up a thorough spraying with nitrate-of-soda solution is very helpful—an ounce of the nitrate dissolved to the gallon of water. Saltpeter is equally good to promote growth.

Things to remember: The roots must be thoroughly frozen. Light must be absolutely excluded. Ventilation is not essential, though plenty of it will do no harm. Forced roots, provided they are not forced to death, are good for transplanting. J. E. MORSE.

Agricultural News-Notes

It takes a little time to surround young orchard trees with screen netting or regular veneer protectors—but it takes the rabbits a mighty short time to peel those trees.

Melilotus (sweet clover), which is found growing luxuriantly by the roadside, has been found to be a good cover crop as well as an excellent one to precede the seeding with alfalfa.

Judicious fertilization means the use of all the barn-yard manure made on the farm together with the use of such first-class fertilizers as will best meet the soil conditions and the real needs of the crop.

Unless rotten apples are promptly removed from the orchard, fruit pests will have an ideal place in which to hibernate during the winter months, then sally forth and make fruit-raising a difficult and unprofitable task for you next season.

One reason why the farmers in Great Britain can afford to pay more for soy bean cake than those of Japan is because the Japanese farmers use it, mainly, directly as a fertilizer, whereas the former first feed it to the live stock and so greatly increase the fertilizing value of the barn-yard manure.

The largest cherry-orchard in California is located in Green Valley, near Suisin, Solano County. There are in all one hundred and twenty-five acres, and the 1910 crop was sold on the trees for about twenty-seven thousand dollars, the approximate price to the owner being two cents per pound. *

Gardening

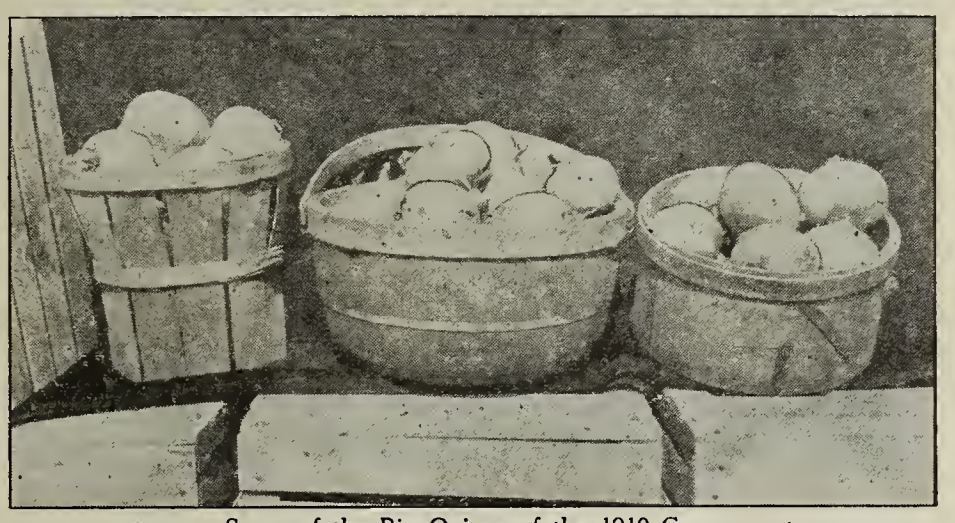
By T. Greiner

Early Winter Work

EVEN now, late in November and during most of December, we can do some (and very effective) work in the outdoor garden. Rhubarb and asparagus can not do their best, and perhaps not even well, unless the ground is very rich. These crops have a good stomach. They can take up and digest very rich food and they must have it.

The old-style advice is to put a forkful or two of manure on each hill of rhubarb. I prefer to cover the ground all around the hills rather deeply with manure, and do this every year. If done now, the plant-foods will be available in early spring and give us the strong growth and big stalks that our customers are willing to pay their good money for. We secure a good many dollars from our little patch of rhubarb every year, but we would not be able to do it without heavy manuring. The same may be said of asparagus. It is no waste of manure to cover the entire bed with just as good manure as we can get hold of.

We are fortunate in having a good lot of manure, the accumulations from horse and cow stables, poultry-houses, etc., piled up during late summer and early fall. It is better on the land than lying in the yard. There the plant-foods may leach out, or nitrogen may fly away when the manure gets hot and dry. What is put on well-drained land is there to stay until plants take it up. At least we are considerably surer of all the good there is in it. It will be in good shape for plowing under when the time comes. Therefore, out with the manure! That is my rule.



Some of the Big Onions of the 1910 Crop

"Some of the Big Onions"

It is the Gibraltar that gives me the big onions, such as are shown in accompanying picture. They are somewhat above the average and went thirteen to the peck, fifteen to the peach (one-third) bushel basket and twenty-six to the half bushel. We had many that large, and some smaller ones. I can raise more bushels of this onion per given area than of any other onion that I know of. Even the Mammoth Silver King is not "in it" with the Gibraltar. It is the mildest known to me, also, and the most delicious of all onions. We have it sliced on the table at almost every meal during the entire fall and early winter.

But it is unfortunately as poor a keeper as any of the large Italian sorts and particularly subject to a disease which attacks it from without. We can sometimes save an onion when first affected by peeling away the outer layer or layers of the bulb covering, the inner ones still being sound. I always aim to dispose of the entire crop before November, seldom failing to tell people that this onion will not keep long. In most households, however, it will not keep anyway, as people usually find it so palatable that the supply is soon exhausted. At present I do not know which is the best protective treatment for this trouble or whether there is any promising treatment.

Celery as a Money Crop

Celery is one crop which has been bringing in money right along, easy money at that, and promises to continue to do that until the holidays, possibly longer. We usually get one dollar for thirteen or fourteen bunches of three plants each, at wholesale, or ten cents per bunch retail.

The blanched celery, directly from the garden, is nearly all disposed of. The next comes from the storage-place in greenhouse or cellar. This is also of the self-blanching kinds stored when about half blanched. For late I have the Giant Pascal. This is one of the finest of all varieties when well blanched, but it is very hard to blanch. Just for that reason, however, it is such a good keeper. The celery that is well blanched must be used, or it will spoil. Pascal, in order to blanch well, must be packed in soil to the top or the light excluded thoroughly in some other way. It is a very thrifty and compact grower. To get it in perfection is well worth considerable pains.

I can not trust my soil as to drainage, or the Pascal would be just the celery that I would like to put in a trench outdoors and keep over for March and April. Gardeners who have deep sandy soil can do this. Make the trench of spade width and deep enough that the tip end of the leaves will be just about even with the general ground surface. Cover with two lines of boards nailed together in inverted V shape, and at the approach of cold weather put on litter enough to keep out frost. In early spring the Pascal coming out of this storage-place should be well blanched and most delicious. There will be sale for it if you have any over your home needs.

The Little Greenhouse

We now start up the fire in our little greenhouse. The benches are made ready and the young lettuce-plants set out from the flats. We will have the satisfaction of being able to put some home-grown lettuce on the Christmas and New Year's table. It goes well with goose or capon. We also have a little common cresses, and some parsley for garnishing and flavoring. It is nice to have these things. But they may cost just as much as if purchased from a near larger grower. We can not expect to grow winter vegetables for market on a small scale and make it pay.

Feeding the Asparagus

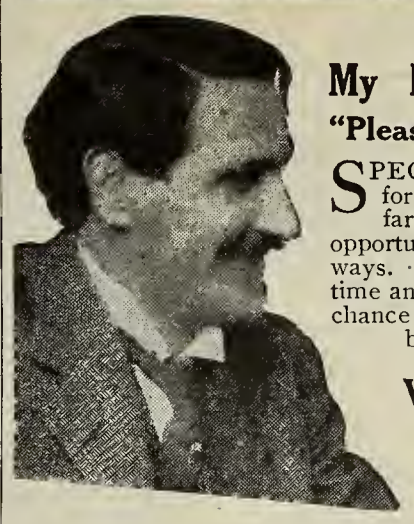
IN THIS immediate vicinity—Union County, Illinois—there are about two thousand acres of asparagus. It is the main dependence of many and consequently we have to work our methods up to the highest possible point of efficiency.

Our fertilizer comes to us by rail several hundred miles and we have learned to "conserve" it. It has long been our custom to manure asparagus in the fall and winter with liberal applications of stable manure. This used to be scattered directly on the rows after the tops had been mowed and removed. But of late years we are discovering new methods of treatment and, among others, that it is best to place the manure under the ground instead of on it. There is no washing away in surface water, the ground in the spring is in better shape, if the manure has been rotting in it all winter, and the manure seems to become available for plant-food sooner.

Plowing a furrow on each side of the asparagus row and filling with manure is a good way, if the asparagus is set deep enough to allow the plow to pass without doing injury to either roots or crowns. After the manure has been scattered in the furrows, they can be filled again with the plow, thus covering the manure.

But if the asparagus plantation is on a hillside, where the soil has washed away, the crowns will be near the surface and be liable to great injury from plowing deep enough to hide the manure. In that case it will be best to take a cutaway and set it so as to throw the dirt away from the crowns, and run it "astride" of each row, forming a slight furrow, taking care not to run deep. After the manure has been scattered in the depression, set the cutaway on the reverse and cover the manure.

T. E. GOODRICH.



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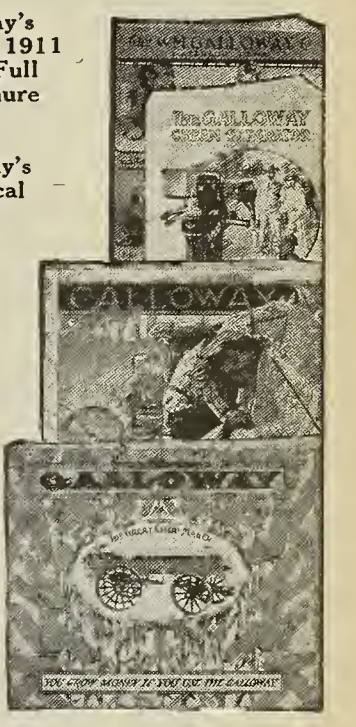

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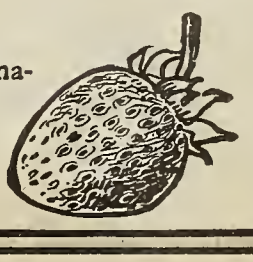

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What is the Book Like?

The name "Farm By-Products" has excited a great deal of curiosity, and some people can not understand, until they see the book, how there can be 267 valuable farm products going to waste.

A "by-product" is something you produce incidentally and not purposely. For instance, buttermilk is a "by-product" because it is an incidental product of butter making. Manure is a "by-product" of stock raising and dairying. You know how to use buttermilk and manure, but there are valuable by-products that most farmers do not get anything out of.

The "By-Products" book tells all about these hundreds of overlooked farm products—how to prepare them for market and how to sell them. It adds 267 new ways of making money to those you now employ.

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By selling your by-products, you must increase your farm profits, much as the Beef Trust and Standard Oil Co. have piled up their fortunes. The Beef Trust makes millions from such by-products as bones, blood, hoofs, horns, hair, scraps, etc. The Standard Oil Company makes nearly fifty by-products from petroleum, and these by-products actually pay them more profit than all their oil.

With the "Farm By-Products" book as a sure guide, thousands of farmers are applying these profitable "factory methods" to their farming.

There are so many farm by-products that every farmer finds a lot of them on his place, and the variety of them is so wide that it gives profitable employment to every man, woman, boy and girl on the farm.

The picture above shows the great "Farm By-Products" book, or Hidden Treasures of the Farm, greatly reduced. The book is really 5x7½ inches, and contains 96 pages of clear, well-printed text. It is not a booklet or a pamphlet, but a real Book—a finely bound book that should greatly increase your bank deposits.

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FARM AND FIRESIDE is the first farm paper to help its readers get better prices for their products. For years FARM AND FIRESIDE and other farm papers, as well, have printed articles on how to increase and improve the yield of the farm. But until now, farm papers have paid but little attention to the business and selling of the farmers' work.

So many farmers have been forced to sell their crops and live stock at a small fraction of their real value that we are devoting a special department of our paper on "How to Sell Well." Farm products of every kind are bringing sky-scraper prices in towns and cities and it is an outrage that the middleman instead of the farmer is getting the benefit.

So we have engaged a staff of practical, successful men to tell how to bring buyers to time, how to take advantage of the market and how to get what you really deserve for your farm products.

This is not a part of the By-Products book, but is a distinct special service we give to our readers. The articles on "Selling" are in themselves easily worth ten times the amount you pay for FARM AND FIRESIDE and the "By-Products" book.

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Simply tear out and sign the blank below and mail it to us with 50 cents in stamps, money-order or draft, and we will send you both the wonderful "Farm By-Products" book and FARM AND FIRESIDE for one year. Remember, now, both of them for only half a dollar.

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So many people are writing for the book every day that we feel sure that you too, will send for one soon. You had better do it right now, while we can fill your request by return mail. The sooner you get the book, the sooner you will begin turning your wasting products into cash. We guarantee that you will get a copy of "Farm By-Products" if you will write within 10 days.

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Springfield, Ohio Nov. 25

Please send me your book on Hidden Treasures of the Farm, "Farm By-Products." I inclose 50 cents for one year's subscription to FARM AND FIRESIDE, which entitles me to the book without cost. If the book doesn't please, my money is to be refunded.

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Santa Claus and Conservation

EVERY fall there comes to the land of spruce and fir the "Christmas-tree man" contracting with the land-owners for thousands upon thousands of evergreen trees. These trees are mostly spruce from four to seven feet high and are about six years old or older, though a few firs are used. These trees are purchased on an average at about $4.00 per hundred. New England, Michigan and Oregon furnish most of them and the number used is estimated at between four and five million annually. Maine, for instance, furnishes about 350,000, Vermont 250,000, New Hampshire 100,000. These states supply New York and Boston and the smaller Eastern cities, Michigan supplies Chicago and other middle Western cities and Oregon the Pacific coast. Maryland, Virginia and the Carolinas furnish holly, laurel and mistletoe in large quantities.

At retail these trees bring twenty-five cents to three dollars each. The lowest estimate would put the total proceeds at upward of $2,500,000. The growers receive of this immense sum only about $175,000.

All over the country forestry associations are striving to wake the people to the importance of protecting the timber-supply, of growing more timber, of instituting state forest reserves. In some regions they are setting waste land to tiny spruces and pines not more than a foot high, while the land-owners who have them growing naturally are sacrificing yearly over four million of them, of seven or eight years' growth, for the miserable recompense of four cents each.

If this great number of trees was set in one tract of land, what a great forest it would make. Spruce is one of the most sought after of the soft woods for lumber purposes. About two thirds of the Christmas trees are spruce. Having seven years' growth it is but a few years before they would be large enough for lumber, as they grow very fast. Farmers here in Vermont say these trees spoil their pastures, but land that grows soft wood in any quantity will not make very good pasture after the trees are cut away. The value of the growing trees is much more than the value of the land for pasture, almost always.

Another feature of the Christmas trade is the inadequate price received for the trees—an average of four cents apiece, while the retailer averages nearer one dollar. There is an enormous profit somewhere, but it is not for the man who grows the trees.

If the growers would refuse to sell anything that would make good timber, selling only those that might be cut with advantage to the best growth, the price would advance very shortly to reasonable rates. Under present methods only the straightest and most perfect trees are cut and the scrub trees remain. Lumber has doubled in price within a few years, yet we sacrifice four million handsome young trees yearly to make one day's holiday.

J. W. M.

Auto Wisdom

KEEP the rear axle and drive pinion bearing always well oiled and see that the universal joints are never allowed to become dry.

See that all bearings are properly adjusted. One loose bearing has a tendency to loosen others, causing knocks, loss of power and crystallization of metal. More harm can be done to a motor by running it on loose bearings for a few days than would result from a year's ordinary use.

The planetary transmission gear is a noisy gear and it would be a good idea to use Dixon grease, as it contains wood sawdust. This dust deadens the click of the gears quite a little. These are the only objections to planetary transmission gears—that they do make a noise and the gears turn when the vehicle is not being driven.

A common carburetor trouble encountered in cars in which fuel is supplied to the carburetor by pressure from the exhaust is a failure to maintain sufficient pressure. As a rule, the pressure does not drop quickly, but it becomes increasingly difficult to maintain it at a proper value. In a case of this sort it is well to examine the tightness of the cap filler of the tank. A leather or rubber gasket is used at this point and oftentimes the rubber will become spongy, the leather caked and hard or some small piece of extraneous matter will become lodged between the cap and its seat.

With the pressure feed for the fuel-supply in two-cycle engines, care should be taken not to have too much pressure. It is not only unnecessary, but dangerous. A small amount of pressure gives all the fuel desired; too much will likely cause a leak which might cause accident should the vapor come in contact with lamp flame at night.

CHESTER E. GOUVEIA.

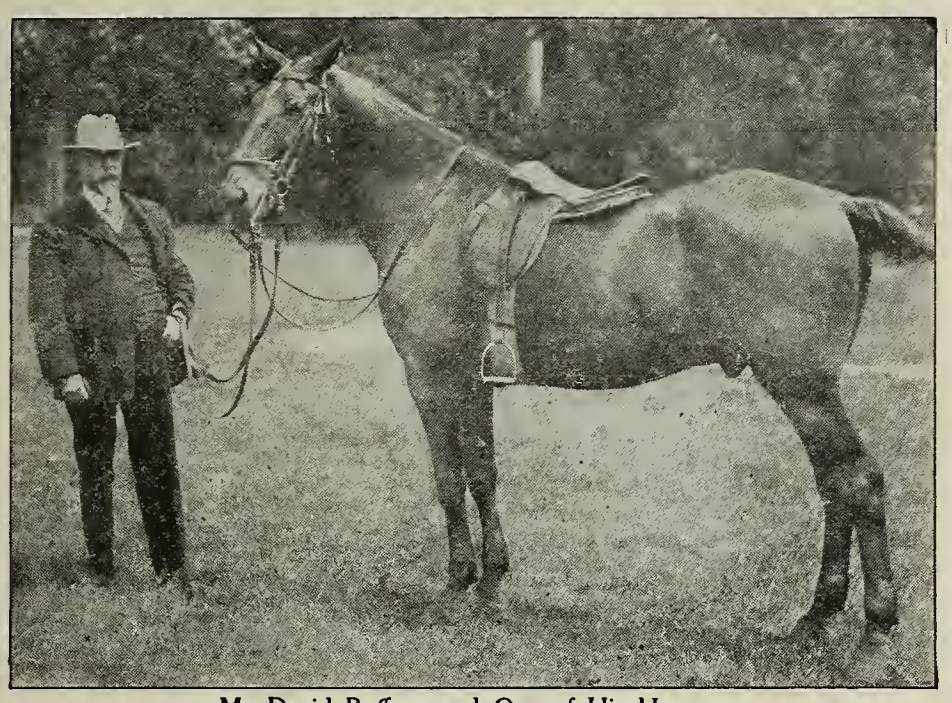
Live Stock and Dairy

Cutting Corners in Expenses—Horses

In the period, not such a great many years ago and which many of my readers will recall, when horses were selling at lower prices than at any time within the recollection of men now living, I made the unpleasant discovery that quite a number of my horses cost me as much to raise as they brought when put in the market. The best, despite the prevailing low prices, still brought handsome sums, but the fact that I was raising any at a loss introduced a new factor into the business that I was not accustomed to and that filled me with apprehension. What if prices should drop still lower?

I studied the situation carefully. Everybody knows now that, in a few years, prices again rose; but that was a thing I could not foresee. The only thing, apparently, that could bring about such a result would be the production of fewer horses, and as farmers are generally rather slow to change from the lines to which they had for some time caused me some dissatisfaction. Everybody seemed to be raising trotters—or, at least, what went by that name—and although a standard had been adopted and people had come to realize that this meant something and that nothing was more certain than that trotters were the offspring of trotters, the stock was less prepotent than it is now and the blanks in the lottery were many. These blanks—the trotters that could not trot—were not of much value and had to be sold at comparatively low prices. The trouble was that while they were not trotters they were nothing else. Many of them were unfit to do anything more than pull a buggy and, without speed, they were not what was sought for that purpose. Moreover, as everybody had them, the supply seemed to be without limit.

I now gave my attention much less to speed and more to size, finish and action, still using considerable trotting blood, but outcrossing a good deal with heavier stock and aiming to raise no under-sized horses and none that were not good-lookers.



Mr. David Buffum and One of His Horses

This animal is an excellent example of the type of large road horse mentioned in the article

have been accustomed, I felt that I could hardly venture to hope for that. The only way out, it seemed to me, was to devise some way to produce them at lower cost.

How to do this was not, at first, clear to my mind. We were feeding hay and corn of our own growing and oats, which we bought, as oats were an uncertain crop with us. It clearly would not do to feed more corn and less oats; no one with any knowledge of feed values could think of such a thing. Experience had proved, however, that we could raise barley successfully, and, by comparing the chemical analysis of barley with that of oats, I felt certain it would do as a substitute, even to feed to the fine stock I was raising. Accordingly, that same year, I raised a large field of barley and it proved satisfactory in every way. Thus the expense of buying oats was saved. For fully ten years thereafter I bought no oats, except a few for the horses I was driving on the road, and even this was not really a necessity.

The hay ration, however, continued a heavy item of expense, for hay at that time was bringing twenty-five dollars per ton at our nearest city where we were in the habit of selling a certain amount every year, usually from fifty to sixty tons. Our corn-stover was also most of it sold, as I kept but few cattle; it usually brought about six dollars per ton and there was a brisk demand for it among the neighboring farmers who kept cows. We had always taken pains to have it bright and nicely cured and it occurred to me that it might be fed profitably to colts instead of sold. To put this to the test, I bought a large cutter, ran the fodder through it and fed it to colts and horses; they ate it with relish and did well. After some experimenting, I finally adopted the plan of feeding this corn-fodder twice a day and hay once, and I found that the stock did better than when hay formed their only forage.

This method of feeding I continued for years, though I found that any appreciable amount of smut in the fodder rendered it unfit—and, indeed, unsafe—to feed to horses. Thus there was now and then a season when we could not feed it; but, in the main, it proved a very great saving.

These changes brought the cost of raising horses down to a point with which I was satisfied. I was still confronted, however, with a factor in the business which This change—the raising of carriage and driving stock instead of trotters—resulted in more uniform prices and a higher general average.

I have given this chapter from my own experience because it illustrates a point that is of the greatest importance on any farm—the desirability of raising the most salable article and at the same time raising it at the least possible cost. The increase in profit is thus a double one and, furthermore, rarely involves any extra labor or expense, but only a little closer application and study of one's business.

I believe there are very few farms where such study would not be advantageous or where changes could not be made that would cost little and yet materially add to the profits. It is not always easy to see at once what these changes should be, nor do they necessarily apply to such matters as I have mentioned. Sometimes they consist mainly in such arrangements as make the work easier to do. I know of one farmer, for instance, who, by making certain changes in his cow-barn which, although considerable, he and his sons were able to do themselves in the winter months, with no expense for new materials, made the care of his herd so much easier that thereafter he was able to get along comfortably with two hired men instead of three. In some way or other a way to save in the cost of production or add to the price realized for products can almost always be found.

DAVID BUFFUM.

This is the first of a series in which Mr. Buffum will suggest some measures for stopping farm "leaks" and increasing farm profits. The second article, "Cutting Corners in Dairy Costs," will appear in an early issue. EDITOR.

A Case Without Cure

A Texas inquirer has a fine Jersey cow which has had about one fourth of a teat cut off, so that it leaks constantly. Several other subscribers have asked me about similar injuries and their treatment. There is no real cure for such cases. There are certain things which might be done by use of a surgical teat-plug, but the quarter of the udder would not be likely to be saved, and we should advise the drying off of that quarter. In any case the cow's value will be greatly diminished. H. G. V. P.

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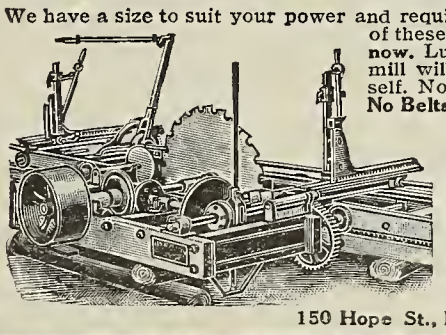

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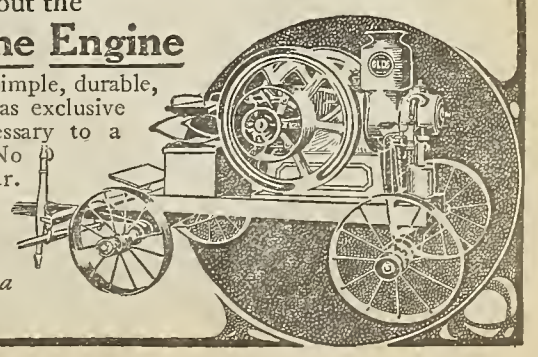

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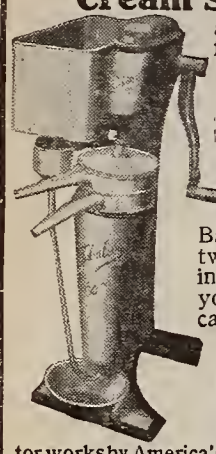

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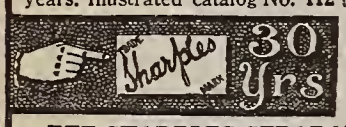

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Live Stock and Dairy

Best Forage Crops for Sheep

THE last paper of this series discussed the root crops—sheep feeds of highest excellence. This time I will wind up the subject with a discussion of forage crops. Clover, rape, vetches, alfalfa and mustard are the forage crops best suited to the feeding of ewes and lambs. Rye is also much in favor for more mature sheep.

The conditions required for the successful cultivation of all of these crops are a deep soil, either natural or created by subsoiling, good drainage, for stagnant water is fatal to most of them, and a friable, well-worked tilth. The method of cultivation is about the same as that above described for the root crops, except that as clover is usually sown with a grain crop in the spring it is subjected to different treatment. In this case no special cultivation is needed except that, when the grain is sown in rows, any weeds that may be found to have sprung up between the rows of grain should be extirpated by the horse hoe, the action of which also helps the growth of the grain by lightening up the soil, but great care must be taken not to disturb the roots. It should not be sown until the grain is well above the ground. Bush harrows are best for covering in the seed, though the light iron ones will do no harm if the grain is well rooted.

Of the many varieties of clover the common red is by far the best. The other red or, rather, crimson variety (trifolium incarnatum) is most useful south of the latitude of the Ohio River. It is strictly an annual and is sown in the fall after a grain crop by simply paring the stubble and broadcasting from twelve to twenty pounds of the seed to the acre. I have grown it largely and always with satisfaction, for it stands the winter well and is ready early in spring for grazing with sheep, or, as it flowers early, can be kept for hay, of which it will yield a heavy crop, and the aftermath can be grazed. By plowing it under in September and giving the land a light coating of farmyard manure, I have grown an extraordinary crop of a winter variety of peas after this clover. They should be sown in October by drill, leaving plenty of room between the rows for the horse hoe, and put down pretty deep, out of the way of the birds. The land will be left after these two crops—if the weeds have been properly attended to—in fine condition for wheat, and the pea "haulm," or dried stalks, are beloved by sheep and lambs.

The amount of clover-seed required varies much with locality, soil and climate. Likewise with the character of seedsmen. This latter variation is the reason why so much more seed has to be sown than Nature really calls for. It is sad, too, to reflect that the more of some of these seeds you sow, the more weeds you will have to root out; but such is life! Hence from fifteen to twenty pounds of alleged clover-seed has to be used. After harvesting the grain crop it is desirable to allow the clover to grow and cover the ground. Sheep are the only animals that should be allowed in a clover-field intended to be mown, and they, for their own sakes as well as for the good of the crop, should only be left in it for a short time, and at intervals. Hogs are ruin to a clover crop, and in wet seasons cattle are almost as bad.

When intended for soiling, clover may be cut in May or June, but if for hay, it should be allowed to flower fully. When cut it should be lightly turned over in the rows and not tossed about from day to day until fully dried.

There are two species of rape, both belonging to the same family as the turnip—summer rape, which is smooth, and winter rape, which is rough leaved. Both of them will grow in almost any class of soil, but they prefer a deep loam. The preparation of the soil is similar to that for turnips, but whether or not artificial manure is used, a heavy supply (five hundredweights to the acre) of common salt should be mixed with the yard manure, as the ash of rape contains forty per cent. of that ingredient. The rough-leaved winter variety, if sown even late in fall, will produce early in spring a forage of which lambs are very fond and it greatly helps their growth. I have described the best method of folding them in a former paper in FARM AND FIRESIDE.

For late summer and fall the smooth-leaved variety will supply admirable food for ewes and lambs. By sowing small areas at intervals, commencing early in April, it can be reckoned on right up to yarding-time. Rape is rather apt to bloat and must be used, at first at least, with discretion, though bloating hardly ever occurs after a morning grain ration has warmed up the stomach.

The old trouble about the quantity of seed to be sown occurs again with rape, which is miserably adulterated, but about five pounds per acre is what is generally recommended.

The vetch is another of those very useful forage crops of which there are two varieties, one of which when sown in fall stands the winter well, at least in our middle states, and produces a succulent food of which sheep and lambs are very fond. It needs the same careful cultivation and manuring as turnips, but must be sown very thickly, as much as two bushels being often used to the acre. It should be in very early, as soon as the land can be prepared, in order to give it a good start for the winter. A little wheat or rye should be sown with it to keep it from "crawling." The "summer vetch," sown at intervals from March onward, should be mixed with some oats for the same reason. It will produce a steady supply of forage. Vetches should always be cut for the sheep and fed in racks which should be often moved to equalize the distribution of the manure.

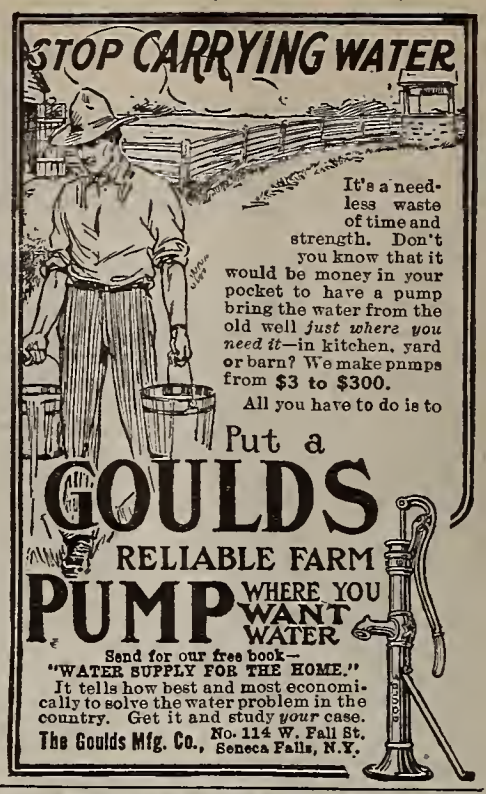
Mustard is grown comparatively rarely in this country, but it has real virtues as a forage, proved by those who have tried it. There are two kinds, the "black" and the "white," the latter alone being used as a forage crop, for which, on account of its rapid growth and its popularity with our friends the lambs, it is very useful. It is especially so because it can be used as a substitute for turnips in a field of the latter which has failed to come up properly or has been injured by insects when very young. It is adapted to almost any soil and is very productive. It is also useful as a fall crop on stubble, as if sown immediately after harvest on the stubble, it will be fit to use in six or seven weeks. It should be heavily manured with farm-yard dung and is grateful for Peruvian guano or superphosphate or for the two combined. Mustard is in itself a good manure if turned in, in preparation for winter wheat. It can be broadcasted and rolled in. A half bushel of seed should be sown. It makes a good soiling crop to be used on exhausted pastures, cut and fed in racks.

As I have had no experience in growing alfalfa in America, though we used to grow it in England under the name of lucerne, I will not venture on offering any advice about it. I will only say that I know it to be an excellent fattening food for sheep, but understand that there is some danger attached to using it for breeding ewes. JNO. PICKERING ROSS.

Keep at least one horse about the farm that is easily managed by the women. It will save lots of time and add to the pleasures of the women-folks.

Where there is no regular system of ventilation, the farmer must, in ventilating the dairy barn, avoid direct drafts on the dairy herd. Also, air should not come in from the rear of the stalls. Best results will be realized with good ventilation in front and above the animals.

STOP CARRYING WATER



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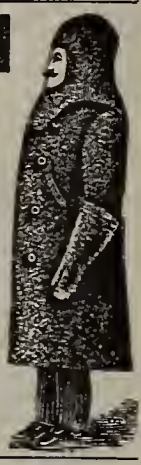

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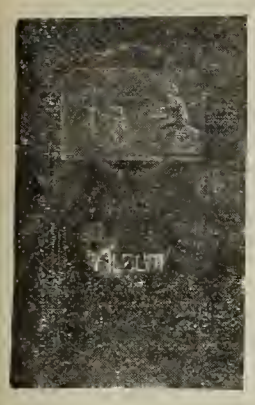

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Live Stock and Dairy

Greek Dairies

IT IS not generally known that our friends, the Greeks, are taking to the farms and the dairies.

The accompanying picture shows a creamery operated and owned by a Greek dairyman named Gust Bolas, at Lyons, Wisconsin. Bolas buys all the way from a quarter to a half ton of milk and cream a day and converts the product into butter. His example has been followed by others of his countrymen who have moved their families from the city to the great dairy regions of Illinois and Wisconsin. The town is located on one of the great dairy lines of the Chicago, Milwaukee and Puget Sound road, which operates some of the longest milk trains in this country.

In this region where the Greeks are buying and handling the milk of many farms, some of the dairymen are changing their practice. At one time Lyons was—it is now—one of the most extensive veal-shipping points on the St. Paul road.

Handles Half a Ton of Milk a Day

Calves from the dairies in greater numbers were handled by a carefully maintained system by which calf routes were and are owned and operated as carefully as the mail-carrier collects mail from the farm boxes. There is now, however, a disposition on the part of some of the dairymen to raise their own dairy stock. Many of them use blooded sires, and instead of selling the heifer-calves, they are raising them. Under this plan the region is being developed as a milk-producing country supplying city consumption, creameries and some bottling plants. J. L. GRAFF.

Fall Pigs in the Wheat

SO MUCH has been said about the high cost of raising fall litters that some hesitate about breeding the sows for fall pigs. As far as my experience goes, fall pigs have always been the most profitable. I never fatten hogs, but sell to feeder when they weigh about a hundred pounds and before they have cost me much. Shoats are usually high in price as soon as grass comes in the spring and then is the time to turn them loose.

A pig needs something green through the winter, and I have found nothing better than wheat. If you raise wheat, just let them have the run of the field until late enough in the spring for them to do damage. If you are not a wheat-raiser, sow some for the hogs anyway.

Some will wonder why I didn't say rye instead of wheat, but I have tried both, and when it all grows in the same field the hogs and other stock will leave the rye for the wheat, and there is really but little difference in the amount that will grow to the acre. The rye will make a quicker growth in the fall, but the wheat is good later in the spring after the rye has grown too rank. It may be turned in the spring and corn planted, if you do not want the wheat. If you do want it the pigs will not damage it materially.

This is in Missouri, and the same plan might not work out in a deep-snow country, but my experience with it here has been all favorable. H. F. GRINSTEAD.

Sunshine for Lamb Feeders

THE increasing importance of the breeding and feeding of sheep, especially of high-grade native lambs, was strikingly illustrated in a report of the receipts at the Chicago stock-yards for the week ending October 22d. It was as follows:

Total Receipts, Week Ending October 22d

	Cattle	Calves	Hogs	Sheep
In 1910....	78,200	9,200	100,500	205,000
In 1909....	85,515	9,821	97,834	136,914
In 1908....	78,421	6,940	101,403	93,519

These figures show that, for the week of October 22d, while cattle and hogs as between the years 1908 and 1910 remained practically the same, the receipts of sheep and lambs considerably more than doubled. In face of this immense supply prices of lambs, according to the same report, remained steady and very remunerative: "Prime natives going to $7.20, Western lambs rising to $7.00; the big end of fat native and range lambs cleared at $6.75 and $7.00; good ewes went at $4.00 to $4.25, and native wethers topped at $4.40."

This report is typical of most recent ones, and they all seem to emphasize the contention that well-bred and well-fed native lambs, which include all the mutton breeds and which can be fitted for market in from four to nine months, promise a far higher rate of profit than do wethers which take two years; also, that the demand for them is constantly rising.

JNO. PICKERING ROSS.

Feeding Facts Essential

DAIRYMEN and stock-feeders when asking us for advice in reference to feeds and feeding rations should not fail to keep in mind the fact that an important essential when arranging a feed ration is full and definite knowledge of the ages of the animals to be fed, the breed, size, purpose for which they are being fed, the kinds of feeds on hand, other feeds that can be most conveniently purchased and cost of same. In the case of dairy cows, besides the foregoing do not fail to give the length of time the cows have been fresh, when due to freshen again, quantity of milk being produced and per cent. of butter-fat contained in the milk (when possible).

In fact, answer all these questions as nearly as can be conveniently done. We shall then be able to furnish advice that will be far more accurate for the particular feeding problem to be worked out for each individual concerned. EDITOR.

If you allow the young stock to bump around among the older and stronger members of your herds, you may expect the little fellows to get cheated.

A pretty good jag of manure will collect around almost any farm every night in winter, and if it is hauled out and spread on the fields the following morning, there will be a great saving in time, labor and fertilizing elements.

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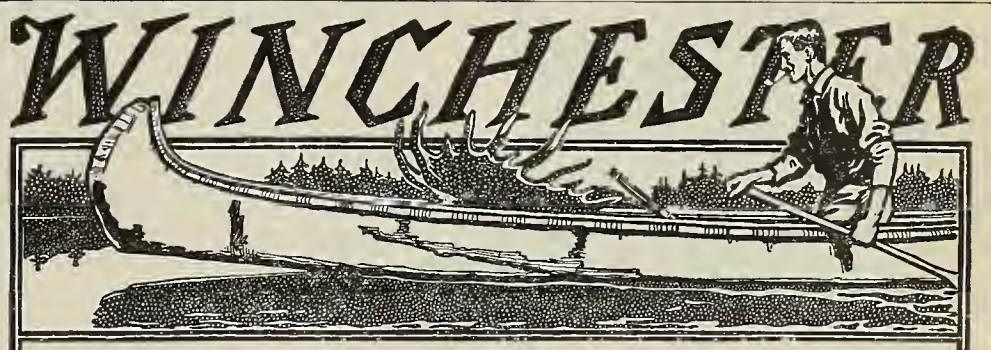

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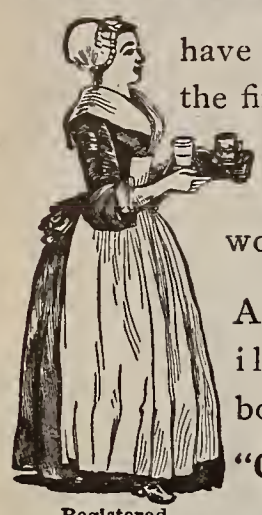

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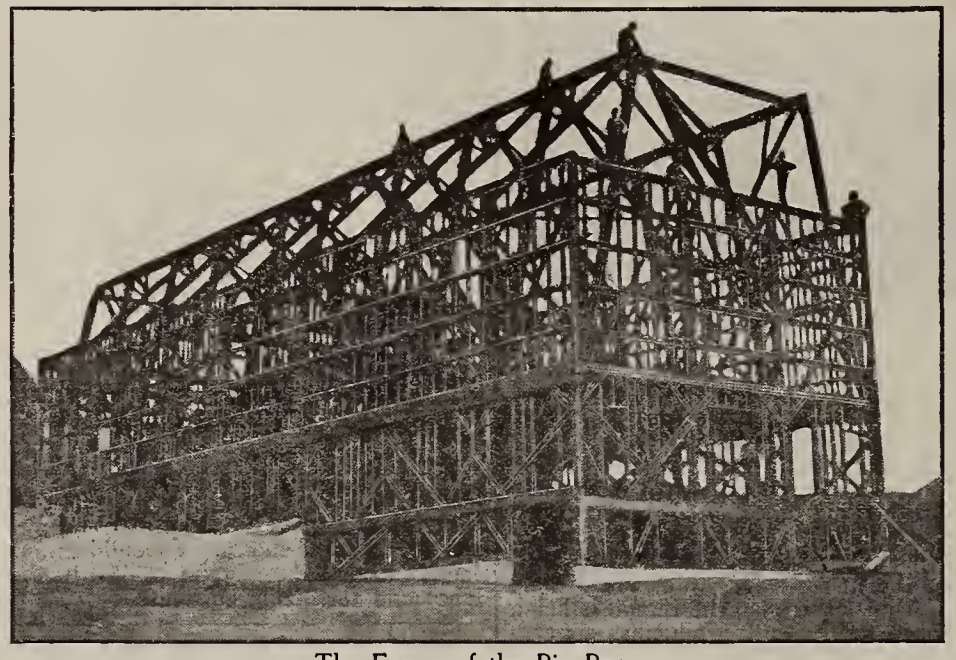
Farm Notes

A Big Side-Hill Barn

THIS barn, built for Sloane Brothers, in Sullivan County, possesses some points of special interest for those who reside in hilly or mountainous localities. It is on a five-hundred-acre farm almost wholly devoted to the production of milk for the city market. About one third of the farm is cultivated, the remainder is in pasture or timber. The barn is built on a rather steep hillside with the west end excavated for an eight-foot basement, while the east end has a sub-basement for the housing of calves and young cattle. This sub-basement has ten box stalls, each eight by ten feet and twenty-six single stalls, all provided with cement floors. The partitions of the box stalls are only four feet high so as to permit of the diffusion of light from the numerous windows.

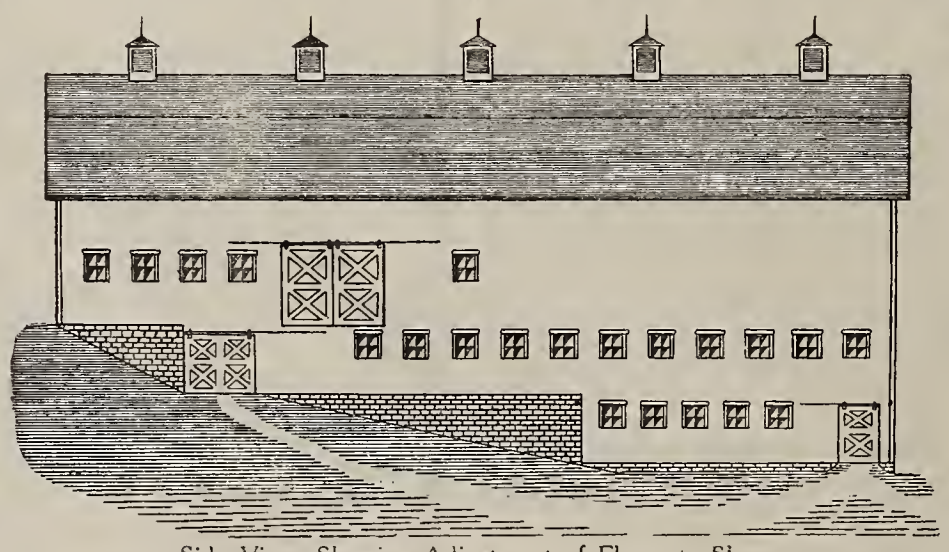
The main basement, forty by one hundred and twenty feet, is fitted for sixty-eight cows in sanitary stalls on cement floor. The stalls are fitted with automatic watering tubs and lighted by twenty large windows which furnish ample light for two thirds of the stalls, but the west end does not get quite sufficient light. This could have been remedied in the building of the walls by using curbing about the windows there.



The Frame of the Big Barn

The main barn floor has at the west end a carriage room thirty-three by forty and ten feet high, above which is a hay-loft. Next to this is the driveway, sixteen by forty, which goes clear to the roof. On the east of the driveway is a tool-room, above this a loft for light tools and above this again large bins for sawdust which is used for bedding the cows. It is carried up to the bins by means of power elevators and dropped to the stables through four chutes located in the four corners of this division. The extreme east end of the main floor is forty by forty-five and thirty-six feet to the roof, clear of all obstructions, devoted to the storage of hay. This is filled from the drive floor by means of horse forks and is dropped to the feeding-rooms through large chutes.

The construction of the framework, up to the roof, is illustrated by the large photograph. JOHN L. SHAWVER.



Side View, Showing Adjustment of Floors to Slope

That the Department of Agriculture was the right one to enforce the "pure food act" is shown by the fact that out of two hundred and five cases that were prosecuted for violations of it only three were lost during the past three years.

Coming Events That Interest Farmers

The East

December 13th. Delaware State Grange Convention, Dover.

December 14th to 18th. New Jersey Horticultural Convention, Trenton.

December 6th to 9th. Maine State Dairymen's Association, annual convention, Solon.

December 20th to 22d. Maine State Grange Convention, Augusta.

December 14th to 17th. Maine State Poultry and Pet Stock Association Show, Portland.

December 13th to 15th. Massachusetts State Grange Convention, Worcester.

December 27th to 31st. Poultry Show, New York City.

December 29th to 30th. American Cheviot Sheep Society Convention, Fayetteville, New York.

December 12th to 17th. Pennsylvania State Grange Convention, Butler.

Corn Belt States

November 21st to 25th. Southern Illinois Poultry Association Convention, Duquoin, Illinois.

November 26th to December 3d. International Live Stock Exposition, Chicago. Red-letter days on every stockman's calendar.

November 28th to December 4th. International Apple Show, Chicago.

December 7th to 8th. Iowa State Convention, Farmers' Institutes and Agriculture, Des Moines.

December 13th to 15th. Iowa State Horticultural Society Convention, Des Moines.

December 6th to 9th. Southeast Iowa Poultry and Pet Stock Association Convention, Donnellsville.

December 5th to 10th. Central Kansas Poultry Show, Newton.

December 13th to 15th. Kansas State Grange Convention, Olathe.

December 26th to 31st. Kansas Golden Belt Poultry and Pet Stock Show, Salina.

December 12th to 17th. Oklahoma Poultry Show, Shawnee.

December 14th to 19th. Wisconsin Poultry and Pet Stock Association, Oconomowoc.

Mountain and Coast States

December 28th to January 1st. Washington Poultry Show, Bellingham.

November 30th to December 2d. Oregon State Horticultural Society, Portland.

December 13th to 16th. Oregon Poultry Show, Pendleton.

December 12th to 13th. Pike's Peak Poultry Show, Colorado Springs.

The South and Southwest

December 27th to 30th. North Carolina Poultry and Pet Stock Show, Charlotte.

December 5th to 8th. South Atlantic Corn Exposition, Columbia, South Carolina.

December 6th to 10th. Arkansas Poultry and Pet Stock Convention, Fort Smith.

If your work carries you out-doors—little or much—and you want to be free from colds, coughs and dangers of damp and wintry weather, and you want to be free from weighty overcoat and muffler try

WRIGHT'S Health Underwear

Outside it is perfect in finish and workmanship—inside it is the fleece of comfort that makes it different from all other "health" garments—a weaving of loops on loops that keeps the body warm, takes up the perspiration, allows perfect ventilation, without chill.

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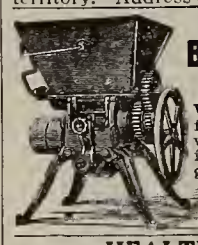

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On 10 Days' Trial?

We don't ask you to take our word for what it will do. Just prove its worth to you by actual use. Write for catalog today, and select the grinder you want.

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Both Kept Up on Scientific Food

Good sturdy health helps one a lot to make money.

With the loss of health one's income is liable to shrink, if not entirely dwindle away.

When a young lady has to make her own living, good health is her best asset.

"I am alone in the world," writes a Chicago girl, "dependent on my own efforts for my living. I am a clerk, and about two years ago through close application to work and a boarding-house diet, I became a nervous invalid, and got so bad off it was almost impossible for me to stay in the office a half day at a time.

"A friend suggested to me the idea of trying Grape-Nuts food which I did, making it a large part of at least two meals a day.

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Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true and full of human interest.

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You buy gloves for service. If you can get *more* service at the price you ordinarily pay for your work gloves, it's "up to you" to do it. You *can*, if you buy

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EISENDRATH'S CELEBRATED HORSE HIDE

The reason is that Eisendrath's Celebrated Horsehide is tanned to resist wear and remain pliable under the hard, every-day strain of farm service. The leather—from the raw hides to the finished product—is handled in our own factory by processes which we control. If you want a glove that will stand wetting—that will wash—that will fit to perfection—that will give you comfort and satisfaction in every way from the first day to the last—wear "ASBESTOL" Gloves and Mittens.

They come in all styles and weights and assorted sizes—for every taste and purpose. Look for the "ASBESTOL" trade mark on the palm. None genuine without it.

If not at your dealer's, write us. We will see that you are supplied and send a handy memorandum book. *Free.*

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Bale 25 Tons a Day!

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Cut Down Cost of Baling!

Bale 3 tons every hour with the **mightiest double-efficiency hay press in the world!** Famous AUTO-FEDAN—simple, easy to run—only two men needed—cuts down labor cost one-third! Three stroke press—self-feed—easy draft—whips out neater and smoother bales than any other press in the world! Ask any man who owns one! Shipped on free trial to responsible parties. Great Book, "Hay Made Profitable"—secrets of 50 successful hay growers—free for the asking. Ask for catalog 7.

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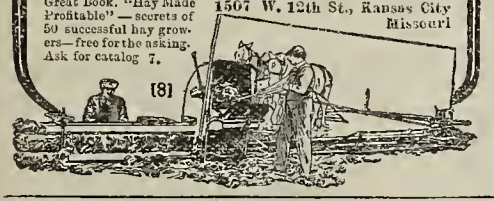

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Your own power, your own outfit. Shell when ready, no waiting, no per cent. to pay. You save time and money by owning a Watts

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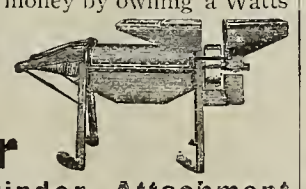

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No machine does better work. Cleans the cob, 13 inch ears down to nubbins and pop corn. Write for particulars and free trial plan. Not a cent to pay, not even freight, if not satisfactory. Can furnish with or without grinder as desired. Price very low. Address

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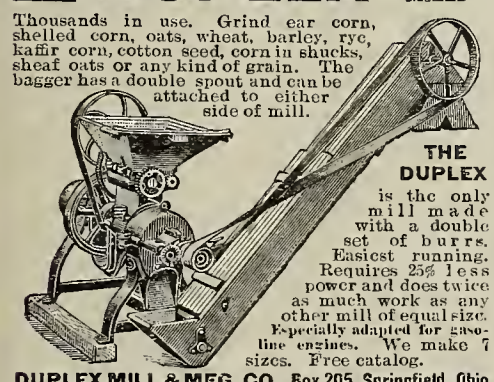
Kelly DUPLEX GRINDING MILLS

Thousands in use. Grind ear corn, shelled corn, oats, wheat, barley, rye, kaffir corn, cotton seed, corn in shucks, sheaf oats or any kind of grain. The bagger has a double spout and can be attached to either side of mill.



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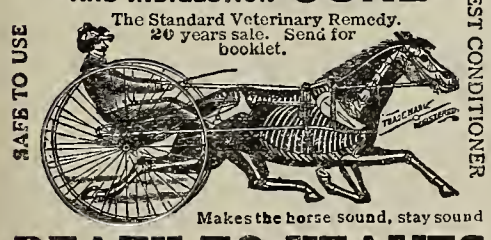
NEWTON'S HEAVE COUGH, DISTEMPER AND INDIGESTION CURE

SAFE TO USE — BEST CONDITIONER

The Standard Veterinary Remedy. 20 years sale. Send for booklet.



Makes the horse sound, stay sound

DEATH TO HEAVES

The first or second $1.00 can cures. The third can is guaranteed to cure or money refunded.

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THE NEWTON REMEDY CO., Toledo, Ohio.

MAKE HENS LAY

By feeding raw bone. Its egg-producing value is four times that of grain. Eggs more fertile, chicks more vigorous, broilers earlier, fowls heavier, profits larger.

MANN'S LATEST MODEL Bone Cutter

Cuts all bone with adhering meat and gristle. Never clogs. **10 Days' Free Trial.** No money in advance.

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F. W. Mann Co., Box 32a Milford, Mass.

WANTED! YOUNG MEN! RAILROAD! Brakemen, Firemen, Baggagemen, Electric Motormen, Conductors. Experience unnecessary. **Instruction by mail.** Application blank and book for stamp.

I. RAILWAY C. I. No. 36, INDIANAPOLIS, IND.

Poultry-Raising

Built for Business

A PENNSYLVANIA subscriber asks for instructions about building a poultry-house. I judge from his queries that he is a beginner in poultry-raising. To give him all the information he asks for would require more than a page of FARM AND FIRESIDE, but a briefer answer on the general principles of the matter will do as well.

I would not advise any one to build a fancy or expensive poultry-house, because fowls will do just as well in a plain affair. All that is really required is that it be comfortable and convenient. If I were going into poultry-raising on a large scale again I would build only cheap houses. I would use second or third grade lumber and cover it entirely with one of the prepared roofings now so extensively manufactured. With this protection, second or third grade lumber will last five times longer than the best grade exposed.

Twenty to thirty hens is as many as should be kept in one house, and it does not require much of a house for that number. I would make it eight feet wide by ten long, with a scratching-shed the same width and twelve feet long. I make the scratching-shed larger than the house because the fowls only sleep and lay in the house, and will spend more than three fourths of the day in the shed and run outside. A house and shed this size is plenty large enough for fifty or sixty growing birds, but to get the best results not more than twenty to twenty-five laying hens should be kept in it. I would build these houses seven feet high in front (which should be toward the south of east) and five and a half at the back. This will give the roof sufficient pitch to shed rain quickly. A window two by three feet is large enough for a house of this size, and I would have it glazed, not covered with muslin. There should be a door at each end, and one in front.

The scratching-shed should have a board one foot wide at the bottom of the front, then poultry netting three feet high, then boards to the roof. This makes a nice, light, airy scratching-shed. Nest-boxes should be placed along the front part of the house inside, and the perches along the back wall. The perches should not be over eighteen inches above the floor, and fourteen is still better. I never used but one "dropping-board" in a house, and when I discovered what a perfect mite harbor it was, I discarded it.

Earth floors are good enough for my houses, but where rats are troublesome, I would put in concrete floors. If more than one house is wanted, I would connect them all together, house, shed, house, shed, and so on, so that in stormy weather I could do all the work of feeding, watering, gathering eggs, etc., under shelter.

The subscriber will note that this is not a fancy house, but a plain business one. He will find it dry, comfortable, easily cleaned and ventilated. I would have all nest-boxes loose so that they can be easily removed, and I would have nothing in the house that is not absolutely needed. The less fixtures inside a poultry-house, the better. Every part should be arranged so that it can be sprayed easily, and then it will be attended to, because quickly done. I found that hens do not like to dust themselves in a box, so I partitioned a corner off in the shed with boards four inches high and put their dusting material in that, and they seem to delight in it..

FRED GRUNDY.

Some Winter Diseases

ONE of the commonest of the winter diseases is catarrh. Cold, some people call it, others speak of it as roup. It is not this last, although so close is the resemblance at times that one could easily be misled. Anyway, catarrh is serious enough. It is catching, also; among birds roosting with heads pressed closely together, the sick ones are sure to give it to healthy fowls. It seems to follow along the line of the pure breeds. I believe this to be due to the fact that the penned breeding stock from which we have bought eggs and breeders has been housed too warmly and pampered, and that somehow a predisposition to take on catarrh follows down through the generations.

You will first notice it by a peculiar shake of the head; next, a running at the nostrils, and sometimes gurgling in the throat. If you can not master this phase of the disease in young fowls in a few days, better kill them. The sniffy-nosed should be separated from the well, housed by themselves, fed heavily on rich foods, with arsenite of antimony or quinine in drinking-water and mash. The head should occasionally be dipped in kerosene—half water, half kerosene. I have known two applications to stop the nostril discharge. I get arsenite tablets of 1-1000 grain strength and place twelve of these in one pint of water. If I give quinine, I give two grains to the fowl per day. This disease is decidedly dangerous among the young fowls; so many die with inflammation of the lungs, which seems to follow the catarrh.

The above disease is likely to take hold of the young in the cool days of fall, extending to the older fowls in winter. There is one winter disease of fowls a year old or over that is seldom known among the young—liver congestion. I think it is due to a rich ration, like corn, and lack of sufficient grit. If one feeds sufficient bran with corn, as bran is a laxative, the danger may be averted, though the grit be missing.

Quite often one will not guess this trouble until the older, fatter hens begin dying. The remedy is varied food, grit and exercise. I. M. S.

This is a Want Ad.

A SUBSCRIBER in Snohomish County, Washington, writes thus to the editor of FARM AND FIRESIDE: "Can you draw us out letters from practical, successful poultrymen who have kept records of different kinds of feed used for different breeds of hens and the number of eggs produced per hen per year?

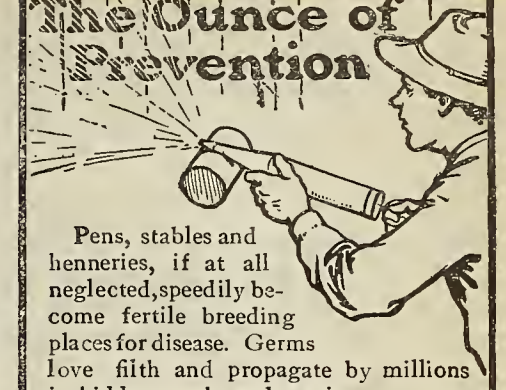
"Has any one found green-cut bones better than dry-ground bones?

"Has any one tried beef-scraps in comparison with the special prepared 'egg foods' that are on the market?

"Can any one give plans for making home-made brooders, both fireless and lamp-heated?"

We pass those questions on to our readers. Has any one tested them out so he can give real brass-tack answers to them—figures and facts drawn from actual experience? If our readers can give us such good data, we will very probably want to publish their letters—and pay for all we publish, of course. EDITOR.

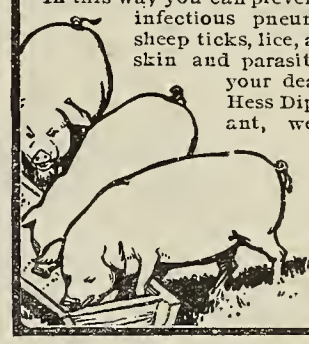
The Ounce of Prevention



Pens, stables and henneries, if at all neglected, speedily become fertile breeding places for disease. Germs love filth and propagate by millions in hidden cracks and crevices.

DR. HESS DIP and Disinfectant

is the *sure* preventive and remedy. Clean the pens and spray thoroughly—over head and under foot, using a proportion of 1 part Dr. Hess Dip to 70 of water. In this way you can prevent hog cholera, infectious pneumonia, mange, sheep ticks, lice, and all forms of skin and parasitic disease. If your dealer has'nt Dr. Hess Dip and Disinfectant, we will supply you. Write for booklet.



DR. HESS & CLARK
ASHLAND
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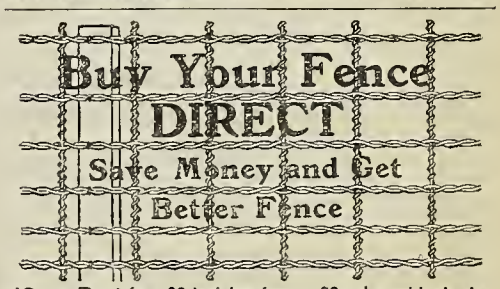
Buy Your Fence DIRECT
Save Money and Get Better Fence



13c a Rod for a 20-inch hog fence. 80-rod spool barb wire $1.80. 3-foot lawn gate $1.75. All heights of farm fence made of high carbon double strength spring steel galvanized wire.

AMERICAN CABLE CO., PEORIA, ILL.

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You never get deluded when you get Genasco Ready Roofing, and you never know the snares you escape by getting it.

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is honestly made Trinidad Lake asphalt—the perfect natural waterproofer that everybody knows about. It doesn't crack, rust, rot, or go to pieces. It gives lasting protection to all your buildings.

The Kant-leak Kleet makes application doubly easy. Saves time. Makes seams absolutely water-tight without cement and large-headed nails. Gives fine finish. Supplied in rolls of Genasco when you ask for it.

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THE BARBER ASPHALT PAVING COMPANY

Largest producers of asphalt and largest manufacturers of ready roofing in the world.

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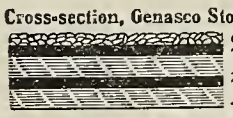
Cross-section, Genasco Stone-surface Ready-Roofing



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Trinidad Lake Asphalt
Asphalt-saturated Wool Felt
Trinidad Lake Asphalt
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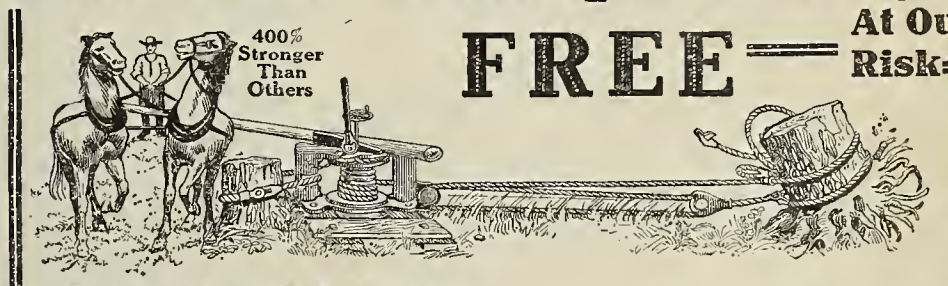
Pull Your Stumps 30 Days FREE — At Our Risk



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Triple-Power—All-Steel

Clear up your stumpy fields with the 3-year Guaranteed Hercules, now sold on 30 days' Free Trial. Test it on your place at our risk. Pulls stumps out, roots and all. 400% stronger than any other puller made. Triple-power attachment means one-third greater pull. The **only** stump puller guaranteed for 3 years. **Only** one with Double Safety Ratchet. **Only** one with all bearings and working parts turned, finished and machined, reducing friction, increasing power, making it extremely light running. Hitch on to any stump and the stump is bound to come. Also pulls largest-sized green trees, hedgerows, etc. Don't risk dangerous and costly dynamite. It only shatters stump and leaves roots in ground.

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We have a special price proposition to the first man we sell to in new sections. We are glad to make you a special price on the first Hercules sold in your community because that will sell many more for us and save advertising. Write us at once to get this.

HERCULES Stump Puller

Just write a postal for our special price—30 days' Free Trial and all FREE BOOKS about the only All-Steel, Triple-Power Stump Puller—the Famous Hercules.

HERCULES MANUFACTURING CO., 178 17th St., Centerville, Ia.

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The Ladies' Home Journal 24 numbers
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The Curtis Publishing Company
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Farm Notes

Humus Works Wonders

WHAT constitutes a run-down soil? Is it lack of fertility? Is it lack of humus? Is it the presence of poisons or toxins in the soil, excreted by the plants themselves? As bearing on this we have received a most interesting account of a case of soil reclamation by a contributor living in Stewart County, Tennessee, who wishes his letter to go before our readers under his pen name, "Mex." He writes:

Some time since I saw a discussion in FARM AND FIRESIDE about the possibility of land losing all fertility. I wish to state a case that I have been personally familiar with since 1867.

This field until recently belonged to a large charcoal furnace property and was farmed on the rent system. In 1867 it was in corn and made a poor crop, probably twenty-five bushels. It was in corn again in 1869 and made such a poor crop it was abandoned and the fence moved off. It was fenced again in 1881 and that being a very dry year it made nothing. It was again put in corn in 1882, which was a fine crop year, but the crop was so indifferent that the land was again thrown out and was run over with coal wagons and cut up in wet weather until it was a sight to behold. It lay this way, growing a few briers and persimmon bushes until 1907, when it was sold to other parties and fenced, put in good fix and planted to corn without any fertilizer of any kind being used. It made the immense yield of seventy-five bushels to the acre.

Now if land can be totally deprived of plant-food, whence came this immense crop? This field seemed to all outward appearance to be about as low in fertility as it could get, but it was level land and did not wash any. It is now, 1910, in clover and looks fine.

I have seen land here in the South so run down until it would not grow a stalk of corn more than two feet tall, with nothing on it, restored to fertility by just restoring its humus. Now, was this land worn out or had it just lost the humus content it once had?

It seems that without humus there can be no producing capacity. See a patch of briers grow up in an old field for a year or so and notice the difference in its producing powers where they grew. Why is this? Every passing breeze wafts some small thing into that patch and once there the briers hold it fast and it rots, making humus to act on the plant-food in the soil and make it available. Nature is constantly teaching us lessons which we ignore in our rush for the last penny we can extract from our soil, until some fine day we wake up to the fact that we can no longer get even the penny and our children have to pay the penalty.

Brother farmers, page after page has been written on fitting your land before you plant your crops, which is all right, but if you will fill your land full of humus, it won't cost half the labor and money to make an ideal seed-bed for the crop.

I often pass a farmer's house and see the droppings from his and his neighbors' cows (we have free range) lying around the gate and in the lane by the cart-load, to be washed away by the first rain—and his crops sadly needing it. Is this man making the most of his farm? I think not.

It is plain that the soil of the field in question in 1867 was seriously deficient in available plant-food or else had become possessed of poisonous properties resulting from continued growing of corn or grain by renters, without any rotation of crops. The soil was, as a natural result, destitute of organic matter, and the soil organisms that assist in converting unavailable plant-food into usable form were unable to multiply and add their beneficial influence to the chemical processes always actively going on in a productive soil.

In the light of recent investigations made by plant physiologists in the study of plant nutrition it is reasonable to believe that the soil of this field had become oversupplied with injurious acids or toxic substances exuded from the roots of the crop too steadily grown. These poisons had accumulated in the soil until it had become practically impossible for the corn-plants to make a vigorous, normal growth. Had a systematic rotation of crops been followed of various grains, grasses, legumes and root crops, the exudations of one plant would have been neutralized by those following, the result being to keep the soil free from injurious substances which cause "soil sickness."

In this case a tedious process of soil treatment and improvement was carried on by Nature which required nearly half a century to do what scientific handling of the soil can usually accomplish in a half dozen years at most, by means of soil amendments, such as lime and green manuring, stable manuring, rotation of crops, adaptive, intensive culture and, of course, drainage if required. Nature's way is like the mills of the Gods, slow in grinding. The farmer to-day must accelerate the motion of Nature by using the aids science and practice have proven effective. EDITOR.

The Most Pressing Needs of American Farmers

[CONTINUED FROM PAGE 3]

and to retain the old, much beloved ancestral home, besides easily finding capital to start his sons in farms, and endow his daughters. So he had sacrificed the pride of old possession, and yielded to the temptation.

Another class of men who were regarded as very desirable tenants belonged to families who had occupied the same farms for many generations. Mutual feelings of esteem had grown up between these people and their landlords, and secure in their holdings, they felt safe in doing their utmost to keep up the condition of the land. They formed a sort of tenant aristocracy, gave their children a good education, and surrounded themselves with a due share of comforts. They did no manual labor, but found ample occupation in superintending the work of their laborers. They probably averaged about five of these for the first one hundred acres, and two or three more for every additional one hundred of their holdings. A three-hundred-acre farm would thus find steady employment for eight or ten men and probably as many horses. Wages were low, averaging about $3.50 a week to foreman, shepherd and horse-keeper, $2.50 to ordinary laborers, and $1.50 to women and boys, of whom many were employed in weeding, scaring birds and other light jobs. Two or three of the unmarried men generally lived with the family, and since the farm houses were mostly roomy old granges, often very picturesque, this could be done without disturbance to the privacy of family life. Cottages were provided for the married men, either on the farm or in the neighboring village, at almost nominal rents, and they had many little perquisites—a half rood of garden, a good pigsty, plenty of skim-milk and so on.

The sons, who were generally strongly imbued with the rural Englishman's dislike for trade or a city life of any kind, were put to work on the farm until, as practical experts, they were able to help the father in the management of home, or were drafted as farmers as chances offered in the neighborhood.

The daughters spent their mornings in kitchen, dairy and chicken-yard, learning their mysteries and helping the mother until the time came for them to have a house of their own, which mostly happened pretty quickly, for they were often very charming, well educated and sometimes really accomplished young ladies, apt prey for Cupid's bow. Since neighbors were near, farms being seldom more than a mile or two apart and villages numerous, they managed to enjoy a good deal of social life. The church was a great center, and they usually belonged to a local book club. From all this it may be seen that it was natural that the home life of the farm was found sufficiently inviting to do away with any desire to leave it.

So far I have gone in trying to describe the domestic life of the English farmers of fifty years ago; and now I will try to show, as shortly as possible, how they managed their farms so as to cause them to bear the large crops and the great numbers of live stock which was usual among them, without in any way allowing the land to deteriorate. The past half century has seen hard times for the British farmer on account of the enormous influx of cereals and animal food from every quarter of the globe, but it is generally understood that he has, by becoming more of a fruit-grower, gardener and dairyman, and by breeding animals for export, got back on to the road to prosperity.

Before entering on an attempt to describe these methods of farming it may be well to guard against the misconception that I am trying to lay down rules for the American farmer's conduct of his business. My desire is merely to draw attention to the leading principles, the application of which brought success amid more strenuous surroundings than we have to contend against—this in the hope that some ideas may be suggested which may point out ways to ward off the difficulties under which, according to the paragraphs quoted at the head of this paper, our agriculture is suffering or is likely soon to suffer.

This is the first of a series of three articles in which Mr. Ross has applied his fifty years of farm experience to the solution of some of the most pressing problems that confront the American farmer. The second will be printed in the December 25th issue. EDITOR.

This Beautiful Calendar

With Every Farm and Fireside Subscription

A Present From the Publishers

FARM AND FIRESIDE wishes to present this beautiful 1911 Calendar to every subscriber. It is the most beautiful Calendar FARM AND FIRESIDE has ever made for its readers, the most expensive, too; and it is by far the handsomest Calendar for 1911.

The 1911 Beauty Calendar will make the most showy and handsome picture you ever saw when hung on the wall of your living-room. It is two and a half feet in length, printed on the finest heavy paper, brass bound at top and bottom so it won't tear or roll, with a patent hanger, all ready to hang up. **And it is printed in twelve different colors.** The page that you are now reading has been printed once, in black. Imagine how beautiful the small reproduction of the Calendar here shown would be if it were printed twelve times, each time in a different color. The actual Calendar which we will send you is thirty inches long—nearly three times as long as this small copy.

The Handsomest Calendar for 1911

It has cost us a great deal to make the 1911 Beauty Calendar. We wanted FARM AND FIRESIDE readers to have the handsomest and best calendar of the year, and we have made it for you at great expense. You can get it—without cost—if you ask for it right away. Only one hundred thousand of these Beauty Calendars have been printed. Therefore, only one hundred thousand of the four hundred and fifty thousand subscribers of FARM AND FIRESIDE can get it—only about one subscriber out of every five. You should hurry to get your Calendar, therefore. **We guarantee that you will get a Calendar if you send your subscription before December 20th.**

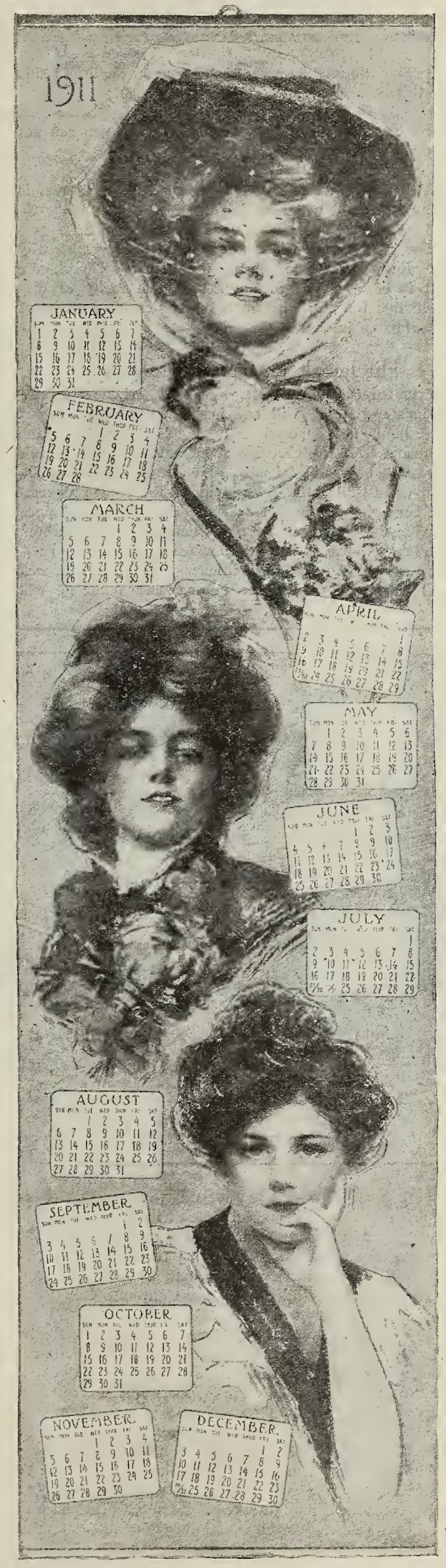
The Three Most Beautiful Pictures

We started to make your 1911 Calendar almost a year ago. We decided that, to make it more beautiful and more interesting than any other calendar this year, we would show the pictures of three girls, instead of one, and that these would be the loveliest girls' heads painted in recent years. Months were spent in searching for them, and here they are—three beautiful, healthy, American girls—the handsomest girl pictures in years.

Hang It in the Living-Room

After we got the pictures, months have been spent in making the Calendar itself. The Calendar for every month has been drawn by hand by an artist. The paper on which the Calendar is printed is the best of glazed picture paper, the kind expensive pictures are printed on when bought in stores. And as we said before, the Calendar has been printed twelve different times, each time in a different color. **The result is a gorgeous display of color that will brighten and cheer every home.**

Hang it in the living-room, where every one can see and admire it. It is the prettiest Calendar of the year and you will be proud of it. **To get the Calendar without cost send your subscription by December 20th.**



The Big Christmas Number

THE NEXT ISSUE of FARM AND FIRESIDE will be the big Christmas Number **and will be sent only to paid-in-advance subscribers** to FARM AND FIRESIDE. This beautiful number will be full of handsome pictures, Christmas stories and Christmas cheer. It will be one of the handsomest, most interesting and most beautiful numbers ever printed by FARM AND FIRESIDE. **Your subscription must be paid in advance in order that you receive this beautiful Christmas Number.**

How to Get the Calendar

We guarantee to send a copy of FARM AND FIRESIDE'S 1911 Beauty Calendar, absolutely without cost with every subscription to FARM AND FIRESIDE that is mailed before December 20th. The Calendar will be sent carefully packed in a tube, postage prepaid, **and we guarantee it will reach you in perfect condition.**

Christmas Offer No. 1

Send 50c. for a one-year subscription to FARM AND FIRESIDE —24 numbers—and you will receive the 1911 Beauty Calendar at once, without cost, postage prepaid.

Christmas Offer No. 2

Send $1.00 for a three-year subscription to FARM AND FIRESIDE (to one address) 72 numbers, and you will receive the 1911 Beauty Calendar at once, without cost, postage prepaid. You will also receive without cost a box of 50 beautiful Christmas post-cards, all different. The post-cards are described on Page 30.

Christmas Offer No. 3

Raise a club of three Farm and Fireside subscribers for one year each. Send us the addresses of the three subscribers and $1.00. Each of the three subscribers will receive the 1911 Beauty Calendar. You will receive, in addition, the big box of 50 Christmas post-cards described on Page 30. The subscriptions may be new or renewal. One of the subscriptions may be your own.

Farm and Fireside for a Christmas Present

A year's subscription to FARM AND FIRESIDE, together with the 1911 Beauty Calendar, will make the finest Christmas present in the world. By accepting Offer No. 3 you will obtain your own subscription for a year and the Calendar, together with a year's subscription and Calendar for each of two friends, all for $1.00; and in addition, you will receive a box of 50 beautiful Christmas post-cards.

An Announcement Card

If you give a year's subscription to FARM AND FIRESIDE to each of two friends, we will send to each friend on Christmas Day, if you so request, a handsome **Announcement Card** stating that FARM AND FIRESIDE will be sent for a full year, 24 numbers, and that the gift is from you. The announcement card is a handsome, heavy card, printed in many colors. If you prefer, we will send the announcement cards to you, in envelopes, and you can send them yourself. But we will be glad to send them to your friends, putting your name on each card as the giverof the subscription. and paying the postage.

These Christmas offers will be withdrawn on Dec. 20th. Write your order on the blank opposite or on a blank piece of paper and mail to Farm and Fireside to-day.

Cut Along This Line

Nov 25
F. and F.

I accept your Offer No....., for which find inclosed $.....
Send FARM AND FIRESIDE and the 1911 Beauty Calendar to each of the following addresses:

Name.....
Address.....
Name.....
Address.....
Name.....
Address.....

If you accept Offer No. 2, or Offer No. 3, you will receive a box of 50 Beautiful Christmas Cards, in addition, without cost.

Farm and Fireside, Springfield, Ohio

This Calendar Offer Expires on December 20th

SUBSCRIPTION PRICE

One Year (24 numbers) . . . . 50 cents
Canadian Subscriptions . 1 Year, 75 cents

Entered at the Post-Office at Springfield, Ohio, as Second-Class Mail Matter.

Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."
The date on the address label shows the time to which each subscriber has paid.
Subscribers receive this paper twice a month, which is twice as often as most other National farm journals are issued.
Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelope.
When renewing your subscription, please say it is a renewal, and if possible send the label from a recent copy. If all our subscribers will do this a great deal of trouble will be avoided.

FARM AND FIRESIDE

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ABOUT ADVERTISING

FARM AND FIRESIDE does not print advertisements generally known as "readers" in its editorial or news columns.
Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment.
Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser in this paper should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.
FARM AND FIRESIDE is published on the 10th and 25th of each month. Copy for advertisements should be received twenty-five days in advance of publication date. $2.00 per agate line for both editions; $1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2¼ inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.
Letters regarding advertising should be sent to the New York address.

Still the Cities Outstrip the Farms

FROM figures available at this writing it looks as if the concentration of people in the cities is still going on at an uninterrupted and increasing rate. The population of the nation has increased since the last census about twenty per cent. The population of the cities has averaged about thirty. The back-to-the-landers have their work still cut out for them.

On the whole people go where they are happiest—if they can. They can go to the cities and with nothing but their hands make a living. There are so many people wth nothing but hands that the tide is hard to stem.

The man who has the tools and the land necessary for farming should prepare to profit by the tendency to the cities. He has the power to stay in the game of agriculture when others leave it. The high cost of living seems likely to continue—and this means high prices for farm produce. The farmer is cashing in on denying himself the pavements, the excitement of city life, the pleasures of the crowd. To the really healthy human mind, what the farm has to offer in place of these is worth far more, and the farmer has the chance to profit by possessing a sane and healthy human mind. The production of food for all these cities is a huge and indispensable task, the doers of which must be paid. The drift to the cities leaves fewer people proportionately to perform it, and it looks as if they would be able to demand more for their work than in the past.

But, on the whole, people go where they are happiest. The family that has the land and the machinery for profiting on the farm by the drift to the cities must solve the problem of making farm life happy. Otherwise it is not worth living. Better schools, better churches, better farming, more social activity—these things are essential to successful living in the country.

Thousands of people are going back to the farms when they might very well live in the city. To such the pavements, the excitements of city life, the pleasures of the crowd have become a deadly bore. If we could all see the matter in that light—before paying for the experience—it would be better for the rural community. The pleasures of life are as great on the farm as in the city—that much may be taken as certain—and for the mind that sees things sanely and truly they are greater.

The cities will grow faster than the country so long as land keeps rising in value, and remains necessary for farming. Those who have it or can get it should stay and work it. Those who have more than they can work, should let some one have it who can make good use of it. The drift from the country to the city is just like the drift of water from a sponge gripped in the hand—it is very largely a forced stream. And the grip that forces it is, among other things, an inability on the part of farm boys and girls to gain access to land on profitable terms. That is why Iowa and the best portions of Missouri are making such a poor showing in population. But it doesn't mean that those who have Iowa and Missouri farms are losing money. Far from it. It means that a great many Iowans and Missourians can't get good farms.

* * *

Wonder if an agent won't be around soon selling wireless fencing?

A rank, untrimmed hedge-row is a detriment to good roads, suffocating to passers-by and an eye-sore to the premises it bounds.

The farmer who thinks he can "run his business" without taking his wife into his counsels is pretty apt to run against a snag before he knows it. While women may not always understand all the fine points of farming, they are often able, through some divine instinct, to tell how things ought to be, and the man who trusts that instinct is not very apt to come out wrong.

It gives no one the sore eyes to look on the bright side of things.

No matter how much you chew the rag you can not Fletcherize it.

The mind that is whetted by hard circumstances is good stuff and will keep keen.

Did you ever consider that perhaps one reason why the farm folks are letting the country church die out is to be found in the fact of the rarity of old-fashioned families with hosts of wholesome youngsters growing up in them?

Hitchcock and the Parcels Post

IT IS forecasted that Mr. Frank H. Hitchcock, postmaster-general, will say in his forthcoming report that he is not opposed to a parcels post. Quite the contrary. Mr. Hitchcock's attitude toward the parcels post will be really friendly. He recognizes, no doubt, that when Chile falls in line with all the other progressive countries of the world in adopting the parcels post, leaving the United States and Timbuctoo alone without the breastworks, it is quite time for a progressive postmaster-general to modify criticisms. So Mr. Hitchcock will no longer oppose the innovation. What he will oppose is any proposal to give this great modern convenience to us at the present time or in the near future. He is in favor of the principle of the parcels post, but against its application. He is glad to see Chile fall in line with the procession, and would no doubt look on with satisfaction while Timbuctoo came into camp; but as for us, the thing is different.

If we understand Mr. Hitchcock correctly, he thinks parcels post a good thing, but too rich for the American's blood. We have the postal savings bank to install, and to take on parcels post now would be a work beyond the strength of the department. Chile may be able to handle it, but it would "swamp" us. Cautious Mr. Hitchcock! He reminds us, somehow, of the prohibitionist who is in favor of the law, but against its enforcement. Let us suggest that Mr. Hitchcock should favor the immediate passage of a law adopting parcels post, but putting off the actual introduction of it until proper arrangements can be made. This would meet his objection and give us some earnest of future accomplishment. The people would be satisfied with such a law, we think. But we predict that Mr. Hitchcock will oppose it. For we are not ready as yet to believe that Mr. Hitchcock will favor any step whatever in favor of this greatly needed reform. His love for it will be purely platonic, we opine. Do we hear any evidence to the contrary?

The Apple of His Eye

Will he try as hard to keep his promises as he did to knock the apple?

Has Your Wealth Doubled?

ARE you twice as rich as you were ten years ago? The census says you are—if you are an average farmer. An official forecast states that farm wealth, according to the present census, has increased from twenty billions to fifty billions—and that means that if you were worth ten thousand dollars ten years ago, you are worth twenty-five thousand now—if you are an average farmer.

This is a mighty fine showing. It means a heavier background of assets for farmers everywhere. It means that farmers can live better than then; can buy more of the good things of life, and that the factories that make them and the people who work in the factories ought to be more prosperous. For good fortune is contagious, and prosperity spreads from class to class.

To be sure, a lot of this seeming increase in wealth is a good deal like the watering of stock on Wall Street—it represents no real benefit to anybody in a productive way. Take Iowa, for instance—and what is true in Iowa is true from Pittsburg to Denver, and from Minneapolis to Memphis. Iowa has made no gain in population; her farm population has no doubt fallen off. But her farm values have increased from $1,500,000,000 to $3,500,000,000. Does this mean that Iowa has two and one third the productive strength in her farms that she had then? That her live stock, her barns, her machinery and her farm capital in the true sense of capital have increased in that ratio? Not at all. Only one seventh of that increase is in such things. The other six sevenths are in land values.

The hundred-and-fifty-dollar land of to-day is no more productive than the seventy-five-dollar land of 1900—if as productive. This morning's Chicago papers state that there are a hundred applicants for every farm in the vicinity of Kewanee, Illinois, the lease of which falls in this fall, and that landlords have advanced rents to eight dollars an acre. This is what makes the great showing as to land values—scarcity of land.

Such wealth is of no use to the working farmer, if he owns his land. In fact, it damages him by increasing his taxes. And, of course, it makes it harder for him if he rents. It is merely nominal wealth, like the watered stock of a railway, to the farmer who works his farm. To be sure, it is a nice thing for the owner if he wants to move to town and live on his rents; but we all agree that such a course is a bad thing for the farm. The increase in farm "wealth" will bear a lot of careful examination. It is real and genuine, in the ordinary acceptation of the term—but there is wealth that produces more wealth, and wealth that doesn't.

To Our Oldest Readers

THIS winter FARM AND FIRESIDE will be a third of a century old. Thirty-three and one third years is a long time. Slowly the world has faced about since then. Then, we were looking back to the war and its fruits. The South and the North were at odds, and it seemed as if they would never become friends. Now that is all past—happily—wonderfully—past. There is no such thing as sectional division. We are all studying the same problems. Each section has its problems, but the basic problems of farming are everywhere the same. That is why the National Farm Paper is finding such a great field for service. It gives the broadest view and brings together the greatest number of minds.

When FARM AND FIRESIDE was founded, we knew nothing of microbes, bacteria, or the true principles of the treatment of pests and diseases. The whole art of fruit growing has been transformed since. It has been a long time in years, but a longer time in change and progress.

How many readers have we who began with the first number and have followed the paper to this time—for the thirty-three years? We are preparing a Roll of Honor of these truly "constant readers." Write us if you belong upon it. We want to hear from you.

The FARMERS' LOBBY.

By Judson C. Welliver

A very tired, hungry and dazed boy of fifteen walked up to the clerk in the National Hotel, Washington, a few months ago, and said:

"I am Elmer Halter, from Conway, Arkansas. I came here to see the Secretary of Agriculture. He sent for me."

The clerk had doubts, but finally telephoned, and found that the boy was right. Secretary Wilson had important business with that boy, and a dignified official appeared in a few minutes seeking him. "Did you come alone?" demanded Prof. O. B. Martin, who found him at the hotel.

"Yes, sir; and I haven't had much to eat, either. They said I could eat in the dining-car, but when I went in they said it cost a dollar, and I never saw a meal I'd pay a dollar for yet."

"Didn't you have any money?"

"Gee, yes, plenty; the bankers' association gave me a hundred dollars, and I had my prize money, and some father gave me; but you don't think I'd pay a dollar for a meal?"

Elmer was duly fed—and extensively. His appetite gave the crop reporting service concern for the visible supply of food-stuffs. Loaded into a taxicab for his first auto ride, he opined that the "contraption was mighty fine, but he'd sooner have one of them new disc harrows."

Boys and Boll-Weevils

That afternoon Elmer and three other boys were formally ushered into the secretary's office. The others were Bascom Usher of Bennettsville, South Carolina; DeWitte Lundy of Lexington, Mississippi, and Ralph Bellwood of Manchester, Virginia. The Usher boy, at seventeen, was the oldest.

Secretary Wilson was more embarrassed than the boys, who were all armed with the utmost assurance. They had come to get their diplomas, and the Secretary, getting the humor, and then the pathos of it, made them a mighty good speech and handed out the sheepskins.

Each of the four boys had won the first prize in the Boys' Corn-Growing Contest in his state. The prize was a trip to Washington and a diploma to be presented by Secretary Wilson. And that gets me back to where my story really begins.

Heard about the boll-weevil, of course? Yes? You'll think me an idiot then when I explain that the boll-weevil has lately been proving a great benefactor to Southern agriculture, and that the trip of these four boys to Washington is part of the proof. But listen to the story.

It's really the story of Dr. Sanford A. Knapp and the boll-weevil. Doctor Knapp, officially, is the special agent in charge of farmers' coöperative demonstration work under the Department of Agriculture; the man who put the boll-weevil on the bum; patron saint of the Southern farmer, and apostle of diversified farming—and right farming—in the South. Worth knowing about, too.

The Germ of the Demonstration Plan

He used to farm in Benton County, Iowa, when Secretary Wlson farmed in Tama County, same state, and they were great friends. Each was for a long time professor of agriculture in the great Iowa Agricultural College. Doctor Knapp became president of the college, and then was tempted away by an offer of a big salary to run a great farm in southwestern Louisiana. It was something of a patch, that farm, its acreage being almost the same as that of Rhode Island; rather over a million acres. The effort to develop that immense tract into a farm was about the most discouraging that ever man undertook. To get labor, to find intelligent foremen, to induce people to do as they were told, to get them to unlearn their ancient "dark of the moon" traditions, to make them believe that some other way might possibly be a better way—that proved well-nigh impossible. The people simply wouldn't do as they were told, and at last a great idea came to Doctor Knapp. He would do it for them; make them see it done; let them see the results; convince them in that way that he was right.

The day that farm demonstration plan was put into operation, the big Louisiana farm began to look up. The skids were, coincidentally, placed gently but firmly under Mr. B. Weevil; a pry a thousand miles long, with one end at Washington, was put under Southern agriculture; and when it began to lift, Mr. Weevil, who had been used as the fulcrum, had his back broken. He is still kicking, but in his widely advertised program of putting the American cotton crop out of business he has failed utterly to make good the promises his press agent put out in advance.

There was nothing in the early experiences of the big Knapp farm which suggested how the weevil was later to "get his." Doctor Knapp learned that the Southern planters and farmers were the most willing people in the world to learn; but they had all come from Missouri and must be shown. He showed 'em. He went first into rice and sugar-cane growing; later into cotton. He laid out sample farms at convenient locations throughout his huge domain, and each of these was developed and cultivated as an object lesson in how to do things. The people came and saw and went away to do what they had seen; and they did it successfully, too.

He went into fruit-raising; and for this particularly he wanted Northern people. It was hard to get them; but demonstration farms at last interested them. First a few came, saw how the fruit was handled and what it produced. Some remained, farmed according to the demonstrated plans, and sent back home for friends and relatives to join them. It was an endless chain, and it has been pulling Northern people to Louisiana ever since. But vastly more important than that, it gave Doctor Knapp the big idea of demonstration farming all over the country as a means to improve farming everywhere.

The old friendship between Knapp and Wilson, back in Iowa, gave to the Louisiana bonanza farmer the chance, at last, to try his demonstration plan on a national scale. Mr. Wilson had succeeded Knapp as professor of agriculture at the Iowa college, and when Wilson became head of the Department of Agriculture, with some large notions about making it more than a political sop to the fool farmer—you know that's exactly what the department used to be—he sent, post haste, for Knapp.

"I've decided that all the farmers in America are from south of the Iowa state line," he said, "and I want you to show 'em," he said.

"Pretty large order," opined Doctor Knapp.

"Yes, and you're the only man that can execute it; so you've got to take it," replied the secretary.

Master of Rice Culture

They made the deal, and the first big task Knapp undertook was to develop a rice-growing industry. He traveled all over the South, looking for soils, climates and water supply conditions that would lend themselves to rice culture. Then he got on a boat and took a trip around the world, studying rice and the methods of its culture. He visited China, India, Japan, the East Indies—everywhere that rice grew successfully. He gathered up samples of soils and of different varieties of the seed. He had the seeds tested out in the different potential rice areas of this country, and found that we had an immense area peculiarly fitted to the production of a certain Japanese rice. Then he got seed enough of this variety to get the business started. It has grown into the great rice production of our south Atlantic and gulf states. In recent years, with the development of hardier varieties and the spread of knowledge about the business, rice has been trailing steadily up the Mississippi Valley, until a few seasons ago some enterprising folks on the Mississippi bottoms in southeastern Iowa tried the crop, and made good.

For his great services to the industry, Doctor Knapp was made president of the National Rice-Growers' Association; and he was kept in that position until he flatly refused to serve longer. He had meantime been transferred to his great Washington work, and couldn't find time to look after the association's business.

Doctor Knapp had left the South before the boll-weevil had got to doing his worst. By 1904, when large sections of the South were utterly discouraged about the possibility of saving their great staple crop from the boll borer, Doctor Knapp had developed a theory about how to fight the brute. He went down to Texas with his theory, and went back to demonstrating just as he had done in Louisiana. He picked out farms in different neighborhoods, and went to raising cotton in spite of the weevil. He plowed very deep in the fall, and harrowed in the winter in order to conserve moisture. He taught the people the absolute necessity of choosing the best seed, right in the field, and with the greatest care. His plan was to plant the cotton wide apart, so as to let the sunlight in; for the entomologists had discovered that sunlight was fatal to the weevil, which is certainly a striking application and verification of Scripture, considering that his are the deeds of darkness. He told the farmers to harrow across the rows after planting, and after the cotton had come up. They were perfectly sure that this would ruin everything; only it didn't. Then he taught rapid, shallow cultivation. Finally, he adopted the idea of picking the punctured "squares" and burning them, in order to destroy the eggs. He taught piccaninnies to do this part of the work, paying them so much per bucket of punctured "squares" that they brought in to be burned. This idea of picking and burning the punctured "squares" demonstrated itself so well that on the experiment farms a weevil after a while came to be as hopeless of posterity as an army mule.

Depriving the Weevil of His Livelihood

By these various processes Doctor Knapp raised a bale and better of cotton to the acre in the worst weevil-infected region. Northern readers may not realize that such a result means about the same as forty bushels of wheat or sixty of corn. In terms of farm mortgages, it means there wouldn't be any if all the cotton acres produced a bale each. In terms of automobiles, it means that they would soon be too cheap for the cotton planter to fool with.

But the big problem was to get the demonstration before the face and eyes of every Southern planter. Doctor Knapp kept on working away, extending his field of operations; and so did the weevil. They ran a neck-and-neck race for some years, with the American cotton crop as the prize. But meanwhile Knapp kept on learning new things, and the weevil didn't.

Knapp worked out a theory that the real way to fight the weevil was to starve him to death. When you raise cotton on a piece of land year after year, the weevil is right at home there. But if you rotate, the weevil gets mighty homesick when he discovers that there isn't any cotton for him to monkey with in his neighborhood; and if you cultivate the right varieties of cotton, and pluck and burn the punctured squares before the weevil eggs hatch, why, it's just like taking the jam jar away from Jimmie.

So the next thing was to induce the farmers in the cotton belt to diversify their farming; to raise corn and clover; to produce their own meat and poultry and eggs; in short, to get their "living" off the farm and hold out their cotton as a "cash crop" with which to pay for the things they couldn't raise.

Doing the Job up Brown

Congress was approached and duly touched. Money was appropriated to fight the weevil, and Knapp who is a pretty liberal constructionist himself, used it to finance his propaganda for diversified farming and better rotation of crops. He said that was the way to fight the weevil. Likewise, I suppose if Sir Isaac Newton had been endowed to study the attraction of gravitation, he might have construed it into an order to develop the whole science of astronomy.

And so the fight for better farming in the South was started.

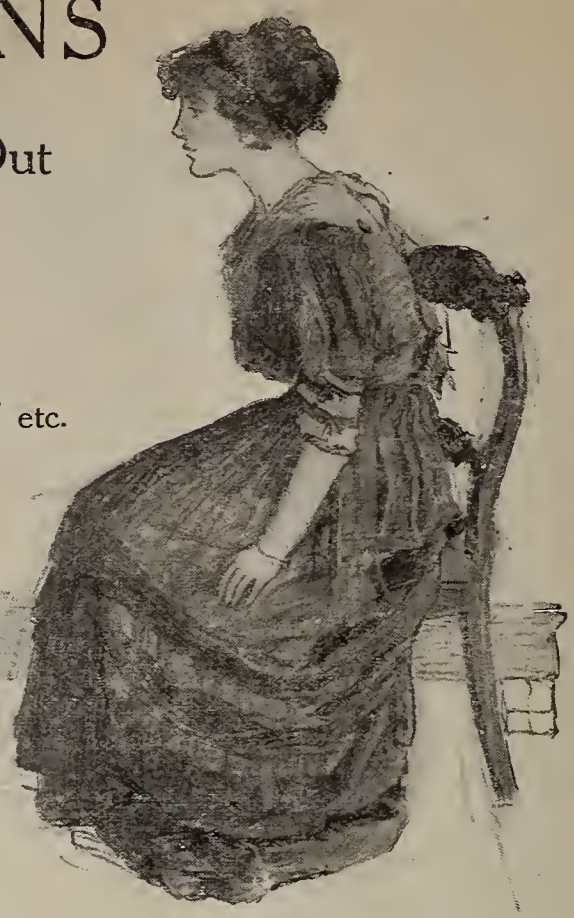
That brings me down to the story of the great demonstration farms all over the South, just when I am at the end of my allotment of space. There's nothing for it but to make this a to-be-continued-in-our-next penny dreadful. So I shall close this chapter with the heroine—that means agriculture in the South—hanging by her eyelashes over the precipice; the hero—that is, Doctor Knapp—is forty miles away, in the hands of the outlaws, standing on the top of a barrel, a rope around his neck; the villain—that's B. Weevil et al.—is about to give the order to kick the barrel from under the hero's feet and swing him into eternity. I'll rescue all parties in the next chapter, hand the villain his comings-up, and put over a regulation lived-happily-ever-after finale. Don't fail to leave your order with the nearest news-dealer for the next number. If all this excitement can't bring the readers across, what's the use trying to write agriculture à la Diamond Dick?

POOR RELATIONS

How Love and Pluck Won Out

By Adelaide Stedman

Author of "Miracle," "Intellectual Miss Clarendon," etc.



Illustrated By Herman Pfeifer

Chapter I.

MRS. MARTIN held her lorgnette close to her eyes and regarded the solitary letter which the eleven-o'clock mail had brought her. Then with the pleasant haste always prior to a little surprise, she inserted one manicured nail beneath the envelope's flap and, tearing open a jagged mouth, took out the single sheet of plain white paper it contained. Neither crest nor monogram ornamented its smooth creaminess, and this fact patent, the lady's interest evaporated and she languidly glanced at the signature, only to start and read it wonderingly, "Penelope Martin!"

"Penelope Martin!" echoed her daughter from the depths of a rose-brocade chair. "I haven't been writing to you, mother. It must be from one of James Martin's daughters. One has the same name, hasn't she? They are the only part of the family I have any respect for, because they have left us in peace all these years."

"Pen, do stop chattering," her mother interrupted pettishly, "and let me see what the girl has to say. Letters from poor relations are generally disagreeable, but maybe she is only engaged or something and wants to let us know."

"Read it aloud." Penelope leaned her face in her hand and prepared to listen, a smile, just waiting to be scornful, twitching her lips.

Mrs. Martin proceeded:

"MY DEAR AUNT CLEMENCE AND UNCLE CHARLIE:—No doubt you will be surprised to hear from me after the long silence between our families: but ever since receiving your telegram at the time of father's death I have felt that I ought to add some explanation to its acknowledgment. Now the opportune moment has come, for this letter is only a forerunner of my sister's and my appearance, as we start for New York within a few days and will arrive almost as soon as my letter.

"No doubt you know that father's estate was in a sad tangle, and by the time we had all the snarls unraveled there was little left. Consequently, Marion and I are thrown on our own resources."

"What does she mean by that," Mrs. Martin muttered uneasily.

"Mother dearest," her daughter laughed, the scorn on her face now very evident. "You don't know a 'hint' for money unless it is worded 'PLEASE REMIT.' Everybody who wants help has a different way of begging for it—but go on."

Very resigned her mother's voice continued:

"I realize how families drift apart when they are separated for years, but I cling to the belief 'that blood is thicker than water,' and both my sister and I quite look forward to seeing you and Uncle Charlie, to say nothing of my name twin, Penelope.

"I will let you know where we are stopping in New York as soon as we arrive.

"So, in anticipation of our first meeting, I am,

"Very affectionately,

"Your niece,

"PENELOPE MARTIN."

"Well," Mrs. Martin ejaculated. "I should have thought that our persistent coldness would have cured them for any fondness for us, but there are some people one can not snub."

"Blood thicker than water!" Penelope mused mockingly. "What foolish man ever said that? Why, it is weaker than weak tea." Suddenly her brow clouded. "Mother," she exclaimed, "it is not a joke, it's dreadful to have 'poor relations' come piling down on us, especially when they are first cousins and think they have a right to expect something. Imagine inviting them to meet our friends; when perhaps they won't have decent clothes or decent manners. Goodness knows it has been hard enough to make our own way, and now we will have the family history in all its gaucherie and poverty sitting right in our drawing-room for every one to take a look at. It's a shame, and I don't see why we should put up with it! We've risen above our relations and they just *must* be made to realize it."

"I can't give them any money," Mrs. Martin interrupted, still thinking vaguely of the "hint." "Father complains of the bills as it is. I never have a cent to spare." She glanced about the rose boudoir with its inlaid mahogany furniture and soft draperies, as dainty and luxurious as a decorator could make them. "New York is an expensive city," she concluded sagely.

"Mother," Penelope's voice held finality, "let's disillusionize them about this blood day dream right away. Their father had the same chance to succeed that my father had, but he didn't use it. That's not our fault. We have our own lives to live, and those girls might be Fiji Islanders for all the part they have in them. The only blood which holds any attraction for me is 'blue-blood!'"

"Penelope!" Mrs. Martin mildly remonstrated: her eyes on the unwelcome envelope again. "The letter is very late," she ruminated, after a moment. "It's been five days coming from St. Paul." Then she added with a start, "Perhaps the girls are here now!"

As if in answer to her conjecture the next moment the telephone tinkled its summons.

"Oh," groaned the girl from the brocaded chair. "If it's my cousins, 'Unwelcome to our city!'"

"Hello," Mrs. Martin's voice was honeyed. "Yes—this is Mrs. Martin—oh—it is you, Penelope—oh—Marion!" she sat down abruptly on a spindle-legged chair which quivered with her weight. "How do you do, my dear! What a charming surprise! We just received Penelope's letter. Yes—you are stopping at the Cavendish—oh, yes!"

"Thank goodness that they are at a half-way decent hotel," her daughter murmured in a somewhat relieved tone of voice. "Don't be so sweet, mother, or I shall call you nothing but a hypocrite."

"Yes—yes—" Mrs. Martin was repeating, her lips set in her "society smile." "We certainly will come at the first opportunity. I—I—can't set a day this moment. I haven't my engagement-book, but we certainly shall see you shortly—yes—good-by, my dear—good-by."

She thrust the receiver into its hook exasperated, groaning, "They are prepared to love us," and she sank dejectedly into the nearest chair.

"Why weren't you less-angelic?" the girl demanded.

"I didn't dare to be without first speaking to your father—you know he might just take a notion into his head to be furious; though I know he detests his family."

"Father! his 'notions' never extend to his 'purse-strings.' You need not have worried. He can't get over the idea that it must be necessary to economize. He will let us dispose of these girls just as we please. If we never called, that would settle the question, and, frankly, it would be the best way. Our friends can't be their friends—the girls can't afford them—so why begin any pretense of friendship. Let us not go, mother!" Slowly Penelope looked around the room, the evidences of luxury appealing strongly to her pride. "My cousins don't fit into this picture," she concluded, "and if I have anything to say about it they won't!"

Mrs. Martin's face was disturbed and undecided: her thoughts filled with fear of unfulfilled family duties: but very evidently Penelope had something to say, and her word was *law*.

Chapter II.

PENELOPE and Marion Martin had been in New York one day. Two small rooms facing a gray brick wall constituted their temporary lodgings, but even these dull quarters were perilously straining to their pocket-books.

It was one o'clock of a sunlit October day, but only pale rays of light touched Marion's blond hair, faintly tinting it with gold: while black-eyed, black-haired Penelope, the older of the two, was a dusky figure in the windowless end of their "parlor."

"Pen," remarked Marion, her naturally laughing face serious, "we will have to get to work quickly. If we don't we simply won't be able to live. Aren't New York prices awful?"

"What you get for your money is worse," Penelope gloomed. "If I stay in these dingy rooms long, I won't be fit to live with. Besides, we can not afford them." Her voice was a soft contralto, captivating in its musical inflexions.

"But, Sis," Marion's soprano broke in, "I would rather live in a nice atmosphere, this way, and do without something else."

"I hope it isn't lunch," Penelope laughed. "I am ravenous. Rolls and coffee are not a very substantial breakfast when we have been accustomed to a real breakfast—not a mere makeshift."

"Wait a minute!" Marion went to the rosewood desk which wobbled uncertainly on its three good legs while the fourth creakingly proclaimed its inefficiency. "I saved yesterday's menu. Let me see the prices." She stared at the close-set black print on the oblong card and announced, walking slowly toward her sister, "I think it would be much less expensive to eat in our rooms. Down-stairs they won't serve half portions to two, but up here you can order alone." She laughed softly. "I'll go into the bedroom, and the waiter will never be the wiser. There will be plenty for both of us. Isn't it a good plan?"

"We can try it," her sister replied, her face sobering as the state of their finances was borne in upon her.

"Hello," Marion was at the room telephone. "Send a waiter to 603 right away, please." She danced back to Penelope. "What shall we order—a steak—chops? Oh, dear no! A dollar for a steak! Isn't that awful?"

"What is this among the entrées," her sister questioned, as Marion perched on the arm of her chair, and both bent over the menu. "Ragout of lamb with brown potatoes, fifty cents. It sounds nourishing, doesn't it?"

"Yes. If it is on to-day's card, order that. Then tea, yes, a pot of tea; and, of course, he will bring bread and butter; so we will have plenty. Gemeni, there goes the bell! Don't answer it until I am out of sight. Her laughing face disappeared almost instantly, and she whispered, "Ready now!"

Penelope went to the door, a burning flush on her face. The smiling waiter offered her a pencil, pad and menu; then waited. The ragout was there, so down went the planned order, looking very meager on the blank white sheet. Somehow the girl's blush deepened as she returned the slip to the man, murmuring, "Service for one, please."

The waiter hurried away, and at the click of the door Marion reappeared, but Penelope did not move until her sister asked excitedly, "Was it all right?"

"Splendid!" She smiled bitterly. "Isn't it humiliating to have to do such things?"

"Never mind, dearie." Marion's dimple suddenly disappeared and she sighed seriously. "I certainly am glad that we have relatives in town! Gracious, isn't a big city lonely? I feel about as large and important as a blade of grass when I look at the sky-scrapers. It will be so 'comfy' to have some one to tell our plans to—Aunt Clem was so sweet over the 'phone. I wonder if she really wants to come and see us."

"She didn't set a time to come, did she?"

"No, but you can't imagine how cordial her voice sounded—I just expect her to be lovely. Of course, she only wrote us on occasions, but you know how such things are! Now that we are here it will be different!"

Marion stopped her chatter for a moment, then went on, her voice guilty, "Pen, it is horrid of me, I know, but won't their dinners taste good? I don't think we properly appreciated our 'three square meals' at home!"

In a few minutes the waiter returned, deposited his tray and left.

"Let me fix everything," Marion exclaimed, "please! You go inside and—and—well, do anything!" Her clear laugh rang out. Hastily she spread a napkin on their little table and placed the small platter with its silver dome in the center of the board, a plate of bread on one side and a pot of tea on the other. A few pats of butter, a cup and saucer, a plate, two knives, a fork and two spoons completed the paraphernalia. Her face gradually lost its mirthful look as she slowly took the tea-saucer for a plate and the ice-water glass for a cup, and it was only mock gaiety that she called at last "Come on, Sis! Luncheon is served." They sat down and Marion lifted the cover from the central dish, revealing some flabby-looking meat in a sea of pale gravy, with floating bits of potato here and there. Suddenly the girl's eyes dropped. The whole meal seemed so meager and mean in its economy. In silence Marion started to pour the tea into her sister's cup, then into her own glass. The pot had not contained very much, but the little was steaming hot and suddenly the goblet broke into glittering parts, letting out a stream of the brown fluid.

That was too much. With a gulp Marion flew to her sister's side and buried her face in her black cloth lap, sobbing, "I am glad that father isn't here to see us! Who would have suspected that his business was a failure after all those struggling years of hard work. I—I am so hungry and the ragout looks so ugly—and so little!"

Penelope's eyes were wet, but she stroked the bowed head tenderly. "Never mind, dear," she whispered.

"Remember, we both are here to make our marks, and we will succeed! Think of all the encouragement you have had in your story-writing and newspaper work; and surely the place for me to use a taste for decorating is in New York. In a month or two we will forget all this. It is rather awful while it lasts, but it won't last long, so come, dear." With quivering lips she kissed the girl's soft hair and then lifted her up. "Be your own sunny self and let us eat this concoction while it's hot."

"I am an awful baby," her sister confessed, "but I can write, can't I?"

"Indeed you can—brilliantly! Sometimes I think I have a genius for a sister." Penelope's calm sweet face was almost motherly in its tenderness.

With growing wonder, as the lunch went on, Marion looked around the unfriendly room, so alien to her keen sense of beauty; but it's very ugliness was cheering. Surely she and Penelope could not be meant to live in such environment. Soon, with the hopefulness of untried effort, they both recovered their smiles and began building air castles; innocent sweet imaginings. Perhaps Aunt Clem would insist on a visit from them. Perhaps Mr. Hastings, the editor to whom Marion had a letter, would find a place for her! Who knew what pleasant things would happen! Everything was possible.

At three o'clock Penelope stood up energetically. "To-morrow morning we start out," she announced. "I can hardly wait!"

"I know I am going to like Mr. Hastings," Marion declared. "John Hastings! Isn't it a strong name?"

"I hope he will like you—or your work, rather," Penelope laughed. "That is far more important."

"Yes," her sister paused, "but—well, shall we unpack?"

Chapter III.

MRS. MARTIN had a nervous woman's constitutional dread of telegrams, so when one of the horrid little yellow envelopes was brought to her on the morning after receiving her niece's displeasing communication, she snatched it from the salver with scarcely veiled dread. "Pen," she called, putting her head into her daughter's room, "come here. I've a telegram from somebody. It's queer, but I never have the courage to open one. Goodness knows what's inside! Perhaps something has happened to your father? Pen, dear, come here!" She looked rather old and drawn in the revealing morning light, her large-featured face sallow under her doctored brown wavy hair.

Penelope appeared, by contrast, very young and fresh, as swathed in the folds of a soft blue kimono, she walked leisurely to the door. "Mother," she exclaimed with placid unconcern, "how fidgety you are! Gracious, I could have heard you call across the street. Here, give me the telegram." She extended one firm, smooth hand, and in a moment had the oblong slip in her finger and read slowly, a puzzled look on her face, "Martha died last night—Harry."

"Mercy!" her mother sighed, not in sorrow, but in relief. "Why in the world didn't the wretched people write! Such a shock as I had." One large-knuckled hand went to her bosom and she sank heavily into a yawning armchair. "Goodness knows why they should notify us!"

"Who in the world is Martha?" Penelope questioned. "Some other 'poor relation,' I'll be bound."

"Don't speak disrespectfully of the dead," her mother cautioned. "I think she was that dreadful George Martin's daughter—no—yes—wait a minute." She thought ponderously, using the whole of her one hundred pounds in the effort. "No," she concluded at last, "I'm almost sure she was Joseph's daughter."

"Who is Joseph," Pen almost giggled. "Aren't we intimate with our dear cousins?"

Mrs. Martin gazed abstractedly at space. "George and Joseph are two of your father's brothers. The other one was Marion's and Penelope's father. These two live on Staten Island, some place. They've always been as poor as church mice. I'd forgotten their existence." She suddenly looked annoyed and added, "Dear me, must we go to the funeral?"

"I'm not," Penelope remarked calmly. "I have an engagement for every afternoon and evening this week—all with people I care about, and I won't break one of them for some out-of-the-world cousin I never heard of. You can go if you want to, and chances are you will get your name in the paper as a relation of the 'dearly beloved.'"

Mrs. Martin started. "Dear me," she ejaculated again, "I don't want that, but it seems as if I ought to be a little respectful, don't you know!"

"Mother, what a hypocrite you are," the girl mourned. "You religiously kept out of this Martha's way all of her life. To-day, if you were in a carriage with some of your friends, you would hate to bow to her on the street, but now you want to respect her, when she is beyond caring. I think a little notice while she was alive would have been more appreciated."

"Penelope! How can you?" Mrs. Martin protested, almost tearfully. "Somehow this thing has upset me. I—I feel blue, but if you won't go to the funeral—I can't—I should get lost—Staten Island! It's easier to go to Europe!"

Her daughter's clear laugh rang out. "I believe that I'm more humane than you are, mother," she mused. "I think it's decent to leave them in peace in their sorrow. Send all the flowers you want to—make it a very successful funeral, but please don't go yourself."

"I think you ought to go with me, dear," Mrs. Martin insisted. "Yes, I'm almost positive that Martha was Joseph's daughter, and he was the nicer one."

"Oh, mother," Penelope smiled sardonically. "I never saw you so unreasonable. Sometimes I think you're a little old-fashioned after all. I'll tell you what I'll do to salve your wounded feelings. To-morrow, I'll go with you to call on my beloved cousins, the Misses Penelope and Marion Martin."

"Very well, then," Mrs. Martin capitulated, "but—"

"Really," Penelope broke in, "I am rather curious to see what they are like—it will be a little like studying ourselves in the rough."

"I think they are well educated," her mother protested. "You know their father wasn't exactly poor."

"All the better!"

Mrs. Martin's face cleared. "Well, I'll try and find that Staten Island address, and send a telegram and flowers," she suggested.

"Do, mumsie. Meanwhile I'll dress. I am going to lunch with Jack." A sudden thought seemed to strike her and she added, "By the way, mother, you need not mention our cousins to him this evening—neither the dead nor the live ones! You know how the Hastings are about family—my fiancé need not know my family history or lack of it."

Slowly the girl rose to her feet, the long, slender lines of her figure lithe and fine. Luxury seemed to have nurtured her. Some such thought was in her own mind as she gazed into a cheval glass, noting complacently the softness of her bright brown hair, the rose tint on her finger nails, the smoothness of her sleek skin! Still languidly she smiled. "The lap of luxury seems to agree with me," she confessed mentally to her pleasing image. "I am glad I'm myself. I'm glad dad's rich. I'm glad we had a chance to make something of ourselves. How I hate poor, vulgar things!" With her own mocking laugh she turned away from the glass, her eyes falling on the telegram's yellow envelope which had fallen to the floor. Then a whimsical light touched her face, and she added to herself, "Most of all, I despise 'poor relations.' They are always so unexpected. They are always wanting something and they are forever bringing up your family history and the part of it, too, that you want to forget."

"'They will come to us yet, but, oh, Pen dearest, I wish it was now!'"

Chapter IV.

AT ABOUT three o'clock on the following afternoon Penelope turned the key in the lock and entered their dark room wearily; only to be grasped about the waist by Marion, who caroled, "Aunt Clem and Cousin Penelope are coming this afternoon! Aunt Clem and Cousin Penelope are coming this afternoon! I am just wild to see them. Thank goodness, we have some of our 'own folks' in New York!" Suddenly she paused, noticing her sister's unresponsiveness, then queried anxiously, "Pen, darling, why don't you say something?"

"I am just as glad as you are, dear," the soft contralto voice answered her, "but I am a little tired. I—I went to four decorating firms to-day, but none of them needed my services. At one place an old gentleman talked to me for at least half an hour. I thought he would engage me surely; but at the end of our conversation he put his hand over mine and said, so kindly that I could not take offense, 'My child, I have no doubt of your artistic ability, but I do not believe in encouraging young women to enter business. Get married and decorate your own home, if it is only a three-room cottage. Girls are best off so.'

"I got scarlet, I know I did. That was just what dear old daddy used to say to us, and such a lump came into my throat that I could scarcely say a word. 'I am not seeking a position—out of choice; though I do love to make things beautiful,' I finally stammered. He looked at me over his spectacles, peeringly, and finally asked me to come back to-morrow. Of course, I will go, but I don't expect any good results."

Languidly she unpinned her hat and slipped out of her silk-lined coat. "I won't have another such," she remarked grimly, "unless I do better than this."

It was so seldom that equable Penelope was despondent that Marion's blue eyes moistened. "Here, lie down on the bed a little while," she coaxed. "You must not look worn when our visitors come. Perhaps through Uncle Charlie's influence you can get a letter to some concern."

The older girl gazed for a moment at the sparkling animated face beside her, then a sudden thought made her smile a little as she put it into words. "Marion, if you had been in my place to-day, when old Mr. Pierce spoke to me, big tears would have come into your eyes; you would have wept and told him our whole story, and, nine chances out of ten, he would have given you the position while I just stood there like a big stick."

"What nonsense," her sister flouted. "Why, that sweet serious look of yours is a thousand times more artistic than my impish phiz." Marion was given to enthusiastic exaggeration.

For a few moments there was silence while each tried to pierce the future by anxious self-questioning. However, Marion rose above her forebodings quickly. "Come, we must dress," she said with apparent serenity. "Black isn't very becoming, is it, Sis?"

"No, dear, but we couldn't afford to buy new clothes in color even if we had the heart to wear them."

"Of course not." Marion's voice was muffled by a downfall of golden curls, as she drew her hair-pegs out. Presently she continued, changing the subject.

"I suppose I should have presented my letter to Mr. Hastings this morning, but, honestly, I got so interested in finishing that book of mine that I forgot. Funny, Mr. Haynes' description of Mr. Hastings did catch my fancy so!"

"Where, oh, where is fancy bred? In the heart or in the head!" quoted Penelope.

"For goodness sake, don't talk about any kind of bread," Marion begged. "When I heard that Aunt Clem was coming, I didn't order any lunch. I thought we would have tea instead. I just scribbled away, and at noon-time I made my heroine go into the most expensive and exclusive of restaurants and order a perfectly delicious luncheon! Really, it was most consoling, but when you said 'bred' the spell was broken, and now I am famishing!"

Marion spoke drolly, but Penelope was in no mood for humor. Abruptly she walked into the next room, and for a few moments struggled hard to overcome her sense of bitter rebellion against circumstances.

In due time their guests were announced, and Marion went to the door, her sunny face radiant with pleasure.

"Aunt Clem," she exclaimed, and embraced that lady much to her discomfiture and the disarrangement of her rigid veil. Then Miss Martin stood in the doorway and submitted to a similar embrace with twinkling eyes.

Penelope gave them a quieter greeting. Already, in this first moment, she was beginning to make discoveries. "Won't you sit down?" She motioned her aunt to their only rocker, and her cousin to an upright velvet chair. Never had the room looked so hideous than as a background for their visitors' silks and laces.

There was an embarrassing silence for an instant, then Mrs. Martin spoke hurriedly, saying just the wrong thing, of course. "What homelike rooms," she began, then catching the humorous light in her daughter's eyes, she plunged deeper into malaproprism. "Of course, they can't compare to your St. Paul home, I know."

"No, indeed," Penelope spoke quickly, a peculiarly soft note in her voice. "A home is vastly different to two rooms."

"Of course," Mrs. Martin replied solemnly, and then again came awful silence.

Where was the cordiality; the affectionate questions as to their welfare, any demonstration of kinship, Marion wondered?

"Isn't it odd," she began desperately, "having two Penelopes in the family. I always call our Penelope, Pen, so I guess I will have to call you Penny, cousin. Pen should have been my nickname, I'm the scribbler." She paused, wondering if her aunt would take advantage of the opening. Mrs. Martin, however, dared not indulge in questioning, not knowing where any intimate conversation might lead to, so she only said a little loftily:

"Penelope is a family name, but it is strange that your father should have used it, knowing there was already one this generation."

"Perhaps he didn't think the two of us would ever come into contact," suggested her daughter.

Scarlet spots settled on Marion's cheeks. Sensitive to the core, her cousin's patronizing manner left her with a hurt, humiliated feeling. Suddenly she determined to test her.

"I hope that was not his thought," she returned sweetly, "for now that we are in the city, we can just be chums."

Miss Martin raised her muff to her lips to hide an irrepressible smile, and as she did so a small package rolled out of it and dropped to the floor, revealing a tiny gold picture-case, which flew open. Marion, stooping to pick up the bauble, glanced at it unconsciously, then flushed quickly as a pair of man's eyes looked up at her from the elaborate framework.

She handed it back in silence, but Penelope knew from her expression that she had seen, so she said drawlingly, obeying one of those impulses which have incalculable results, "I am taking the case down to have it attached to my chatelaine. You saw the picture, Marion, so I may as well tell you (though it is a secret as yet) that it is a photograph of my fiancé. I am engaged—"

Marion started to say, "To whom," then hesitated, when her cousin rendered questions unnecessary by adding, "to a Mr. John Hastings."

"Mr. John Hastings," the other Penelope began, when a queer look from her sister caused her to pause puzzled, leaving Mrs. Martin to finish the sentence by saying, "Yes, of the Albany Hastings."

[CONTINUED ON PAGE 30]

The National Sport

By Eugene Wood, Author of "Back Home," Etc.

Illustrated By Fred E. Lewis

"'A gover'ment OF the pee-pul and FOR the pee-pul'"

IT IS to be hoped that every male American citizen of the age of twenty-one and upwards—females are excepted because they lack judgment—availed himself of the opportunity this fall of engaging in our great national sport. You may think I mean base-ball. I don't. I mean politics. And lest you say, "That isn't sport," I will tell you that Mr. Fingy Conners of Buffalo, who was interviewed at Chicago recently while on a yachting trip through the Great Lakes, declares that politics is the greatest sport going. And you can bet that Mr. Fingy Conners is qualified to speak. What he doesn't know about the game of politics you could put in your eye and never notice it.

Mrs. Conners was along with him, and she was interviewed, too. She said, "Woman's place is home." That's the talk! She's a stateswoman. A lady who can declare in accents of profound conviction, "Woman's place is home," at the same time that she is flying around on a yachting trip (with all that that implies) ought not to be wasting her time watching a Polack hired girl to see that she sweeps under the bed. She ought to come up higher and be made ruler over many things. She ought to be Presidentess. And if she can learn to move her mouth around to different parts of her face while she barks out, "Woman's place is Ho-wum!" and similar dried, preserved, canned and pickled sentiments, if she is pretty handy with her fists and knows how to advertise herself, I know where she can get a whole lot of votes. Talk like that is a sure winner, especially if your actions contradict your words. I just love to see a man pound the table with his fist and kind o' squat down to roar out: "A gover'ment OF the pee-pul, BAHH the pee-pul and FOR the pee-pul!" It sounds good to me. I know that one part of it's so, anyways, that about a government OF the people. That's no lie. That's as sure as you're a foot high. As for the other two clauses—why, there's where the sport comes in.

Perhaps it would be just as well if I gave you my notion of what sport is. For instance—fishing. Catching the fish is sport, but cleaning them and frying them and dishing them out to other people isn't. The campaign is sport, but when the politicians that are elected take hold of the government OF the people, that's work. It's cleaning fish and frying them and dishing them out to certain persons who shall be nameless, and all

"I could hold the king personally responsible and cut his head off"

the politicians get out of it is a beggarly five thousand dollars a year and twenty cents mileage, which is what it costs them to ride on the cars from our place to Washington. Twenty cents a mile! Two cents a mile is unconstitutional, the courts have held.

Sport is where you get the best of somebody or some creature by artifice. The fish thinks it is going to have a nice juicy worm or insect handed to it, and it gets fooled. It gets the hook. If you've plenty of fish and throw one you have just caught back into the water, like enough you will catch the same fish again. It never seems to learn by experience. It never seems to get onto the fact that the platform—I would say bait—is meant to conceal the hook, and not for its comfort and sustenance.

Sometimes the fish won't take the bait that you have been using and you have to try around and try around till you can find something that does interest them. For quite a long time you might whip the water with the prettiest tariff fly you had in your book and never get a rise. Here lately, though, they seem to fancy it. Another popular bait this season was Uncle Joe Cannon. He's one of these patent frogs made out of rubber. He's practically indestructible. And even if he does get snagged on a root and lost, there are plenty more just like him to be had. You might say that this sport is capture OF the fish, BY the fish and FOR the fish, and it would be as true as some other things you hear; for example, that about woman's place being the home, when it costs so much to live that a man can not afford to marry. It takes two to make a home, so I've been told, two at the least, and one of them has to be a man that can make enough money to keep two.

I don't think any of our leading statesmen baited their hooks this year with a promise to reduce the cost of living to such an extent that an industrious and capable man can keep himself and wife and three children without the children quitting school and going to work. To be sure, if the tariff were reduced to nothing at all, if our manufacturers sold their wares on their merits in a fair field with no favors, that would make some difference. I have heard say that the tariff costs each and every family all of six dollars a year. The local bank gets more than that from me. The Standard Oil alone gets double that from me, and the Meat Trust and the Flour Trust and each of the fifty-'leven other trusts that control the prices of everything that I must have if I'm to lead a more tolerable existence than I would living in a hollow tree.

You saw what a poor fist of it Congress made when it let on to investigate the increased cost of living. Don't tell me they really didn't know what caused it. Sure they did. They aren't so foolish as you might think from the looks of them and the way they talk. They knew as well as you or I. We know that the cost of living is the time you have to put in at labor to get so much victuals and clothes and house-room and all such. It takes so many minutes of labor to plow the field and prepare the seed-bed and plant the crops and cultivate them and gather them and haul them to the place where the crops are exchanged. We know that it takes so many minutes of labor to make a barrel of flour or a smoked ham or a sack of coffee or a bolt of muslin. We know that if there was an even-Stephen exchange of minutes of labor at the farm end of the transaction for an equal number of minutes of labor at the factory end of the transaction, the cost of living would not go up at all; it would go down.

In 1830 it took three hours and three minutes of the farmer's labor to produce a bushel of wheat; in 1896 it took ten minutes of his labor. (I haven't later figures by me, but I suppose it took even less in 1910 to make a bushel of wheat.) And the reduction in the time of labor required to make flour and muslin and nails and all such is enormously greater. It takes the farmer of to-day only one eighteenth of the time to produce a bushel of wheat that it took the farmer of 1830, and, just for the sake of the argument, suppose that the other industries have made no greater gain in labor-saving than agriculture has. When they trade in their products, do the farmer and the mechanic get eighteen times as much food and clothing and house-room for their time as they did in 1830?

"Another popular bait this season"

But the first thing I know, I'll be getting serious and that won't ever do. Life is just one rollicking romp with most of us, so why not be merry and gay? When a cloud comes between you and the sunlight, to which you feel that you are entitled, always remember that the cloud is silver-lined. It gets the sunlight if you don't. And one way to be merry and gay is to regard that as a sport which should be regarded as a sport. Take it from Mr. Fingy Conners, who knows if anybody does, that politics is the greatest sport of all. Don't be serious about it. It's sport.

The game is to see if you'll bite on the bunch of feathers tied around a hook so's to look like the fly you like the best. Whether you like the fly that means you get bigger prices for what you sell or whether you like the fly that means you pay smaller prices for what you have to buy, the hook's there just the same. And if you miss the hook and pull off the feathers, they are only feathers after all, and not suitable for your insides unless you are a pillow. You may be one at that; they've been "stuffing" you for quite a while, you know.

And I didn't see many of the statesmen on the bank baiting their hooks with parcels post, such as they have in the benighted Old Country, where they have no free institutions and just submit to be walked on by kings and all such. I'd a heap rather be walked on by a trust than by a king, because I could hold the king personally responsible, and I'd be tempted to cut his head off, which would be naughty, naughty.

I don't mean a parcels post by which you can not send anything that weighs more than four pounds, and you have to pay express rates to the post-office on that, so that a government OF the people and BY the people and FOR the people may not perish. I mean a parcels post by which you could send me a ton of pig-iron if you wanted to and the post-office would deliver it to me, charging me a rate which would just cover the cost of handling and no more. That kind of a parcels post you don't see put on the hook, not this fishing trip. It would mean, as it does in darkest Germany, that you could take my order and send me every day a bottle of clean milk from Cherry, that cow of yours that gives such good milk, or a basket of fresh vegetables or a dozen of eggs or a couple of boxes of strawberries, instead of my having to wait for them till they stew a while in the market-house and stew a while in the grocery, and me paying I don't know how many profits in between you and me. It would mean that you and I could exchange our labor on an even-Stephen basis and both be better off by it.

"Rather be walked on by a trust than by a king"

But that would be unconstitutional. I'm sure the express companies and the commission merchants and their representatives in Congress assembled could turn right to the place where it says you mustn't do that.

It is to be hoped that every male American citizen of twenty-one years of age and upward, and especially every male farmer, availed himself of the opportunity to have a thoroughly enjoyable time at the great national sport this fall. Each of us should go at it in the right spirit, not taking it seriously, not making a pillow of himself for politicians to stuff, but regarding it as a sport in which the players are ranged on two sides. I don't mean that there are the Republican side and the Democratic side; they're really the same. I mean that there are gentlemen on the bank adjusting bait on their lines and casting them into the pool, neat tariff flies and indestructible patent rubber frogs, and in the pool are the fish, some of them leaping and some lurking in deep holes and remembering that these lures have hooks in them.

Politics is sport. Fingy Conners says so. And when these gentlemen get right solemn and pound the table and kind o' squat down to roar at you about woman's place being the ho-wum, and a gover'ment OF the pee-pul, BAHH the pee-pul and FOR the pee-pul, recollect that they're having the time of their lives; the hard work doesn't begin till they have to clean the fish and fry them, when they get to Washington. And since you've contributed to their sport, why not also contribute to their hard work when they get to Washington by making them prove to you that what they do is FOR the pee-pul? It would bother some of them quite a good deal to prove that. Because measures that are undoubtedly for the benefit of those who hold the plow-handles and swing the hammer to have the deuce and all of a time getting through Congress, and then they're unconstitutional, while measures for the benefit of those who keep their hands nice and soft go through as if the skids were greased.

If anybody tries to make you think that a political campaign is really serious business and that the fishermen on the bank are going to make the life of the fishes in the pool one grand, sweet song, just close your left eye slowly and softly, and say to him these words:

"Ag gwan!"

P. S.—You mustn't mind what I say. I'm only fooling. I have to cut up these monkey-shines to raise a laugh once in a while. But a couple of years ago, I was a watcher at the polls and there was one ballot that they threw out that I looked at afterward. I have had it in my mind a good deal since then. In our state we have pictures at the top of the column for each party so as to assist the intelligent voter. One of the pictures represents an eagle flying away with a ballot-box, the same as a real eagle would fly away with a lamb, and underneath the picture of the bird of prey is a circle. The voter should have made an X inside that circle, but instead he wrote the word "No!" He didn't vote the other ticket: he just wrote the word "No!"

I wonder—I wonder—

"Life is just one rollicking romp with most of us"

A Country Church That Has Made Good

By M. B. McNutt

Chapter III.

EDITOR'S NOTE—By this time the readers of these articles are beginning to see why this church has made good, while country churches elsewhere are failing by thousands every year. It is a wonderful story—and yet it is so simple. In this number we have the simple statement of some of the steps from failure to success: First, getting together on the basis of sane enjoyment, in the singing school, the gospel chorus, the base-ball league of the church, the sociables so different from the familiar sort. Then those young people's societies, the strong force of the church fighting for righteousness. Think of a country church so active that it needs a printing-press! The song services in the woods and school-houses hint at overflowing activity. The new plan for prayer-meeting and the Sunday services show how this church has adjusted itself to country life. And above all, note that the pastor is a "children's pastor."

THE singing school in good running order, we began at once to observe all the special days in the church—Christmas, Easter, Children's Day, Rally Day, Harvest Home, etc. A score of them or more. This kept our musicians busy. And the first thing we knew the young people of the church and many of the "outsiders," as they were called, were taking part in these special occasions. They couldn't keep out of it. And the parents, of course, had to come, too, to hear their children sing and play, and so had the doty uncles and aunts and cousins and sweethearts. They just couldn't stay away.

Next we started what we called a Gospel Chorus. Got some live new song-books and went singing around from house to house one or two nights in a week. At first some folks were a little shy of the Gospel Chorus, but soon they were vying with each other to get the warblers to come. This band of singers went to the homes of the aged who were too feeble to come to the meeting-house. It sang for the sick. It made melody in the homes of those who never heard any other music.

Then the athletes were lined up. The boys were encouraged in a field day. Two or three base-ball teams were organized. They played, successfully, many of the surrounding towns including Chicago. One of our teams played a star "nine" from the Fullerton Avenue .Presbyterian Church, Chicago, on the Fourth of July, two years ago, and beat them 20 to 0. The pastor of the city "nine," who had come along to root for his boys, kept insisting that we had some outside professional players in our team, but they were only the husky farmer lads.

The church building was not fitted for social gatherings so a series of sociables was planned for the different homes. These were not the money-making kind, they were sociables indeed. Old and young attended and engaged in the play together. Refreshments were served free. At these gatherings special attention was given to strangers and to the backward boys and girls. And a few of us always had upon our hearts those who were not of the fold of Christ. They got to be a friendly lot of folk. They became well acquainted. And such fellowships! Such friendships! Such companionships! And all centering around the church.

The women of the parish had long had a missionary society. And one of the mothers said to me one day, "Pastor, don't you think it would be a good thing if we had some kind of a little social circle for our girls? They are aching for something to do." I said, "Yes! Let us have it." She invited nine of them to her home one Saturday afternoon. They had a delightful time and they called themselves "The Girls' Mission Band"—deciding to meet thereafter once a month alternating in each other's homes. In these little gatherings were combined the devotional, social, educational work and club features. After the program they sew and make garments for the poor in the city. The society grew and so did the girls. When they became women they changed the name of their band to "The Young Women's Missionary Society," which has forty members. As the young women marry they are transferred to the women's society.

A similar work was started for the young men called "The Young Men's Bible Class," which is simply the young men's Sunday-school class organized. It has fifty members. This class meets every Sunday morning with the Sunday-school for Bible study and is taught by the pastor. It also holds a monthly meeting for fellowship, sociability, devotion, business and literary purposes. It has become the strong right arm of the church and is now furnishing officers and teachers for the church and Sunday-school. It conducts a lecture course—not for pecuniary profit, but for the sole purpose of furnishing wholesome amusement and entertainment for the community. They have had some hundred-dollar attractions on the course. Everybody in the community—almost without exception—patronize the lecture course—irrespective of creed. Among the patrons are many German Lutherans and Catholics. People from the surrounding towns are often seen in the audiences—driving sometimes ten miles.

The young men's class owns and operates a small printing-press, upon which they do all the church printing, including a small local church paper. This class has developed some good speakers and singers. Under its auspices open-air gospel and song services have been held in the groves in the summer-time and in the public school-houses in the winter. When the pastor has been absent on Sunday the young men have taken charge of the service and have given good satisfaction.

You are wondering what became of the dancing. Well, they forgot all about it in less than two years. And there hasn't been a dance at that place for eight years. The dance-hall is rapidly falling into ruin. I never mentioned dancing in the pulpit or in private. It was simply starved out.

Our Sunday-school is thoroughly organized and graded and, including the Cradle Roll and the Home Department, has over three hundred members.

Good business methods are used in both the local work and in the benevolences. I may at some other time be privileged to tell you about our system of finance. It is the pledge system. We have dispensed with the old way of "taking collections for the boards." The plan of raising money by sociables, etc., has been abolished almost entirely. Neither do we make the various societies of the church money-raising institutions.

The Sunday-school and the preaching service in the morning are the only meetings held on Sunday, except an occasional special Sunday evening service. A regular Sunday evening service is not practicable for the country or for our community at least and we do not attempt it. Nor do we have a mid-week prayer meeting for the same reason. The cottage prayer meeting is the best for the country—organizing the parish into groups of twelve or fifteen members each. The groups all meet on the same evening in the week and each has its own leader—organist and chorister. The business of the church may be discussed at these weekly meetings. The leaders of the groups may constitute the pastor's cabinet.

There have been no evangelistic services or revival meetings held in this church for ten years. In former years this method was used a great deal. Such noted evangelists as Moody and Sankey, Majors Whittle and Cole and others held successful revival meetings in the Du Page church. But this method became less and less effective until it failed to arouse any interest whatever. We use the one-by-one method of winning men—as illustrated by the Savior and by Andrew and Philip. And there is not another ten-year period in the history of the church that shows as many accessions as the last decade. There is scarcely a young person in the parish between the ages of ten and twenty-one that is not a member of the church.

The Sunday-school teachers are encouraged to do personal work in their respective classes—getting their pupils to coöperate with them.

Great care is taken to train the youth. We believe thoroughly in the Scriptural injunction to "Train up a child in the way he should go and when he is old he will not depart from it." Once I was criticized for being "a children's pastor." A man in the parish who has children and who has received for them and himself and wife much benefit through the ministries of the church, answered the criticism somewhat roughly thus: "Let the minister alone. His head is level. He knows well enough us old fellows can't be taught any new tricks."

A Christian training class is maintained for the young people who are about to enter the church. There have been few communion services in ten years when there was not somebody to be received and often between communion seasons members have been received.

[TO BE CONTINUED]

The Art of Giving

By Pearle White McCowan

ALL of us need help of one sort or another sometimes. Often the one who to us seems the most self-sufficient is in dire need of just the right sort of help. Perhaps it is only sympathy and understanding that is craved, perhaps it is loving-kindness and joy that the heart cries out for or it may be an actual physical want, but often, sorry fact that it is, when the need is noted the manner of offering help and sympathy is so blunt and untactful as to wound and repel.

How often a wet blanket is thrown over a new-found joy which is welling up in our hearts, by the friend to whom we have flown to tell our gladness, who, instead of realizing our need of some one to rejoice with us, persists in taking a pessimistic view of the situation.

Human hearts are not made to rejoice alone. Joyousness needs sympathy as well as sorrow. The person who is always ready to bubble over with gladness at the joy of a friend will always be popular.

Those who have passed through the depths of sorrow and trial tell us that it was not the profound expressions of sympathy that helped them most at those times, but the close loving handclasps and the ready tears which sprang to tender sympathetic eyes at sight of grief.

Paul must have been thinking of this kind of need, when he wrote "Rejoice with them that do rejoice, and weep with them that weep."

But there is just as much tact and sympathy required in giving of material things. Sometimes even when people are financially well-to-do a little gift will be appreciated, as a head or two of crisp lettuce or peas fresh from our own garden or a loaf of home-made bread to one who has no time to bake.

When sickness or death enters a home and the hands of its inmates are more than busy with the manifold cares and duties thus imposed, a little gift of fruit or some goody which will tempt the appetite of those busy and sorrowing ones, is always appreciated.

The person poor in this world's goods, to whom we may wish to lend a helping hand, may be sorely wounded and hurt by the manner of presenting the gift. No one likes to have others know that it has been necessary to accept charity, that they have been needy enough to occasion the offering of help. So it is certainly necessary for our alms-giving to be in secret.

One year a poor widow, respected and admired by all who knew of her heroic struggle with poverty and ill health, received a turkey from the church. She and her family of little folks had been planning a very modest little celebration, when the wagon from the church drove up to the door and left its basket on the porch. There was no chance for her to refuse it, and it stayed, although the mother scarcely tasted a mite of its contents, for every mouthful seemed about to choke her. "They have talked it over among themselves and decided that we were so poor that they would have to help

[CONCLUDED ON PAGE 32]

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Inexpensive Christmas Gifts

Clever Holiday Suggestions for the Amateur Needlewoman

By Emma L. H. Rowe

Pincushion sachet made of pale green ribbon and trimmed with white ribbon daisies with yellow centers

OF COURSE you are planning to make some of your Christmas gifts, and of course you need new suggestions to help you. Those illustrated on this page are all inexpensive, and yet all dainty and extremely attractive. They are unusual and intimate gifts too, and when they are made at home as you are going to make them, they cost just the tiniest bit of money. In the art shops—well, that is a different matter.

Pincushion Sachet—This little gift serves a twofold purpose—that of sachet and cushion for stick-pins and brooches. Materials: A fourteen-inch strip of (pale green) satin ribbon, two inches wide; three quarters of a yard of medium dark green satin baby ribbon; one and one quarter yards of white satin ribbon one half inch wide; sachet; a few strands of yellow worsted.

Fold wide ribbon to form a slender case; stitch sides of case together by machine or whip by hand; cut a piece of cardboard six and one half inches long by one and three quarter inches wide. Pad one side well with sheet cotton. Slip it into satin case; add sachet; turn under edges of case and blindstitch together.

To make the daisies, halve the ribbon. Tie ordinary single knots in the ribbon evenly two and one half inches; then form loops or petals, with the knot at the outside of each petal, the plain centers between the knots being brought together and lightly gathered and tacked; form into a circle. Make the tiny yellow centers by winding yellow worsted (two pale shades preferably, though not necessarily) over and over a strip of cardboard one quarter of an inch wide; tie securely at one edge; cut the other edge to form a sort of pompon. Tack this to the center of the white daisy petals.

Form the baby ribbon into two short loops, one six-inch loop and two long cut ends; place at top of case, with two daisies above it.

The Invalid or Bedroom Slippers constitute a gift that is sure to please any woman.

Materials required: Three quarters of a yard of satin ribbon about six inches wide, a pair of satin-covered soles which can be purchased in any color for twenty-five cents.

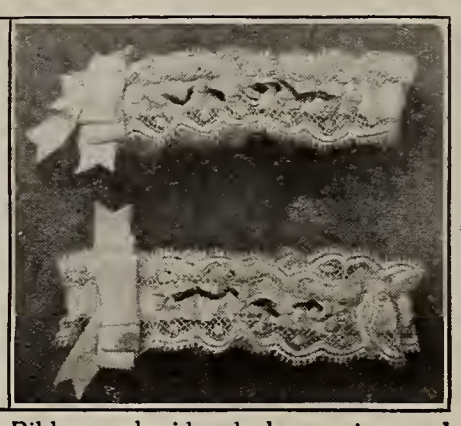
Halve the ribbon. Fold one piece over (right side in), run along the cut edges and along one selvage side (two thicknesses). Turn right side out. With double thread, gather the other selvage edges and reduce fullness to one and one quarter or one and one half inches, according to size of soles. Place this fullness at the center of the toe, with the satin, however, extending away from it; whip firmly to the toe and along one side; then turn the satin back from the sole and finish the other side as invisibly as possible. At the center front where the ribbon would rest upon the instep, turn back the ribbon one half inch and tack lightly into place. This gives an attractive finish, particularly if the under portion of the material be of a different color.

In the illustration a deep red satin was used, which, of course, made no contrast.

A pretty variation is to buy three eighths of a yard of Dresden ribbon and three eighths of a yard of plain ribbon and combine the two—having the lining of the plain and the outside of the Dresden. Thus when the half inch is turned over, the contrast is very pretty and most effective.

Invalid or bedroom slippers which are made of satin-covered soles with the toe portion in red or in pink satin

This sewing-bag of bordered ribbon makes an acceptable Christmas gift



Ribbon-embroidered lace-trimmed garters for little tots

The Sewing-Bag With Handles makes an always acceptable gift for the inevitable pick-up work, the dainty bit of needlework with which the busy woman, as well as the woman of leisure, fills her "idle" moments.

Materials: One and one half yards of bordered ribbon, about six and one half inches wide, and one yard of featherbone for the handles. Bordered ribbon is particularly desirable for this bag from a point of economy, as one border can be removed and used as covering for the handles.

After removing the border from one edge, cut the ribbon in two sections. Place right sides together and whip-gather the cut edges, reducing the lower edge from twenty-seven inches to eighteen inches. Whip short sides together without gathering. Turn right side out.

Two and one half inches from each side seam gather the border edge of the ribbon, reducing the gathered length to eight inches. Also run gathering thread at the inside edge of border and reduce to eight inches. Treat both halves of the bag in this manner. Catch the lower corner to the upper corner (of each end) rather loosely together on the inside. This makes the attractive pointed effect.

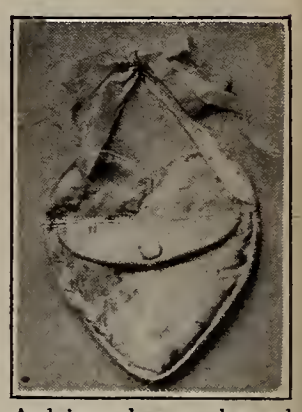
Next prepare the handles. Cut featherbone in two. Lap each half over one inch and sew securely to form a circular handle. Coax by slight pressure into oval shape. Halve the cut border. Place raw edge (right side of ribbon) to right side of shirred border; sew one eighth of an inch in from edge. Place handle along shirred border, really between shirred border and plain border of ribbon; hem plain border down over featherbone. Wrap the remainder of cut border tightly over and over the handle and fasten.

Vanity-case of Dresden ribbon. The chamois is slit so that the powder comes out easily when needed

Vanity-Case—This silken vanity will appeal to maids and matrons, in town or countryside, since it is no longer considered a sin, but rather a necessity to powder the shine from one's nose.

Materials: Eight inches of ribbon four inches wide; a seven-and-one-half-inch piece of chamois (or white flannel) three inches wide; a two-and-three-quarter-inch piece of chamois (or flannel) three inches wide; one half yard narrow ribbon.

In the small piece of chamois cut one-quarter-inch slits all over its surface, keeping them about one inch apart. These will allow for a very moderate supply of powder as the chamois is passed over the skin. Adjust this piece of chamois to the center of the larger piece; turn under and hem where it rests on the larger piece, but overcast both side edges (two thicknesses of chamois). Just before overcasting the second side, however, shake into the little compartment a goodly supply of talcum powder.



A dainty heart-shaped jewel-bag which can be made either of Dresden or plain white ribbon

Next place the strip of chamois onto the wrong side of the strip of ribbon; turn over the edges of the ribbon about one half inch and hem down neatly, pointing one end of both chamois and ribbon.

Attach the narrow ribbon to the outside of the case one half inch from point; two inches farther in, and again two inches. This allows for a secure tying when the case is folded for easy carrying.

The Silk-Covered Tape-Measure is a dainty addition to one's silk sewing-bag—far more appropriate than the ordinary cotton measure.

Materials: One eighth of a yard of ribbon two and one half inches wide, one eighth of a yard of satin ribbon one half inch wide, one winding spring metal tape-measure.

Cut two circles of ribbon one eighth of an inch wider than the circumference of the top of the case of the tape-measure. Work a spray of embroidered flowers in narrow ribbon or silk floss on one section. For convenience place top and bottom pieces in position over the metal case and baste back and forth across the sides; these threads should be removed after the side ribbon is sewed in place, or at any rate removed for an inch on either side of the opening for the tape itself. Adjust the side ribbon and whip its edges to the top and bottom circles of ribbon. Be sure to have the opening or meeting of the ribbon come at the point where the tape draws from the slot in the case. The ribbon at this opening must be turned under and hemmed neatly; this should be done for convenience before the ends are reached. With white silk floss buttonhole the tiny ring which draws the tape from the case.

The Heart-Shaped Jewel-Bag is not so frivolous as it appears. A little bag of this sort is of constant value to the woman who travels or boards or who prefers for any reason to keep her jewel treasures on her person rather than in some insecure drawer or in her handbag.

Materials: Three eighths of a yard of five-inch ribbon; one yard of half-inch ribbon, preferably white.

Cut a heart-shaped piece of muslin five and one half inches long by five inches wide; duplicate in silk. Make a cross fold (one inch) in another piece of muslin; place muslin heart pattern upon the muslin, so that the fold will be a scant third from the top of the heart; cut out muslin; also cut muslin at the fold. Next lay the two muslin sections on the ribbon and cut silk sections. Cut two small curved silk sections one and one half inches deep by four inches wide; interline with muslin.

Baste silk heart sections to muslin sections; then place double sections together; turn under edges one eighth of an inch and buttonhole outside edges together with white silk. Buttonhole the edge of flap; slip it under top section of heart; stitch on machine (or catch-stitch in place) sewing at the same time through the center of half-inch ribbon, with which jewel-case is suspended around the neck.

Turn under the edges of lower half section of bag (silk and muslin); buttonhole together. Make buttonhole in flap and sew button on upper edge of half section of bag. Make a chamois or Canton flannel bag slightly smaller to hold trinkets.

The Tiny Hat Needle-Book is very fetching. The hat itself is crocheted from mercerized floss (pale blue); the leaves are of soft white flannel or albatross; the flower wreath is composed of eight or ten single blue forget-me-nots, and the bow and tie strings are made from three quarters of a yard of blue baby ribbon.

Directions for Crocheting—Chain six; join with slip stitch to form circle.

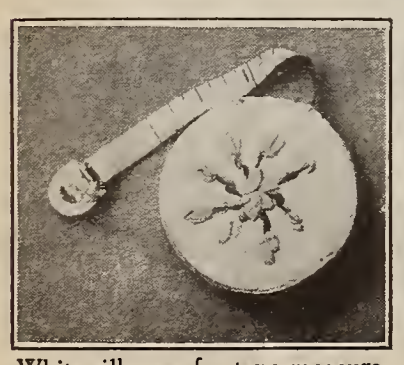
First Round—Chain three; make nineteen double crochets over circle; join with slip stitch, at top of chain of three.

Second Round—Chain three; make two double crochets in every double chochet of previous round; join with slip stitch.

Third Round—Chain three; one double crochet in every other double crochet of previous round; join with slip stitch.

Fourth Round—Chain three; one double crochet in every chain

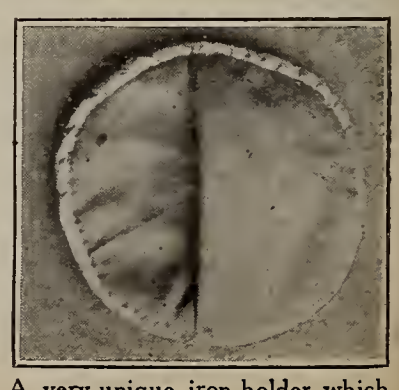
[CONCLUDED ON PAGE 30]



White silk case for tape-measure charmingly worked in ribbon embroidery in delicate colorings

Needle-book in the form of a blue silk knitted hat, trimmed with dainty velvet forget-me-nots and a big double silk bow

Convenient and easy-to-make handkerchief-case with shirred ribbon band—just the thing to use when traveling



A very unique iron-holder which has a side pocket to protect the fingers from the heat of the iron

The Lost Pages

By Erie Waters

NESTA was the embodiment of joy, she lived to lavish love on all about her. Sometimes her friends failed her. Still, she rose lightly from every disappointment, putting aside the shattered idols, or—mending them.

A motherless child, she was sent to boarding-school. There she was warmly loved, and—as was inevitable—imposed upon.

Fay Farnham was her best-beloved friend and room-mate. Nesta admired her for her beauty and talent, and Fay responded to her affection. She, however, was more dependent upon praise; sunning herself in the sweet, generous flattery of the loving girl.

Together they were striving for the prize most coveted by the graduating class. Never had Nesta worked so hard, never had she searched so diligently for facts for the historical essay which was to decide her fate. Stern facts she sought to add to poetical fancies, letting something of herself creep in; something of a singularly bright, original mind. A something that responded to higher thoughts—a something in which Miss Ritchie, the teacher of literature, delighted. For this favorite pupil she hoped great things.

Evening after evening found the girls at their desks, working hard, but not showing each other the results. Nesta, in the middle of her essay, introduced a romantic story, founded on fact; a noble and inspiring tale of self-sacrifice, of devotion to duty, of an enduring love. No one, not herself imbued with noble and lofty ideals, could have told the tale so sweetly, so truly. The essay was complete without it, therefore Nesta did not number the pages, nor fasten them together, lest the examiner might wish to exclude the romance. Her work was done first—quite one week before it was necessary to send it in. Rereading carefully, she placed the essay in an envelope, to seal later. She laid it in her desk, with a silent prayer that it might be found worthy.

There was an unusual stir in the school-life. The excitement of preparing for the closing, the completion of work and the last touches to the simple white dresses. Nesta was more than ever in demand. Fay still toiled at her essay, troubled and unsatisfied. It would be a great blow to her self-esteem and love of approbation to lose the prize. Nesta never found a free moment to read her essay again, but sealed the envelope and handed it in.

It was a pretty scene. Friends were gathered to see the white-robed girls receive their prizes. Lovely they were in the buoyancy and beauty of youth, as they grouped themselves on the platform to sing the national anthem. With one exception, the numerous prizes had been given, the recitations and songs concluded.

"We will now," the principal explained, "read the two essays selected as worthy of our most important prizes, reserving the names of the winners till the end."

Nesta listened with throbbing pulses to the opening words of her essay. It moved onward smoothly, the fine elocutionist giving the emphasis required. She waited for the middle pages—the part she loved best; the part into which she had put her heart. Vainly she listened. The romantic touches, the heart history, the delicate fancies that she had hoped would brighten the dullness, were omitted. She was sorry—very sorry. No accuracy of fact alone could make this a prize-winner.

"We will now read the other essay."

Again the words ran smoothly, though not with the finish, the carefulness, the accuracy of Nesta's article. The reader's voice changed. Now the audience listened to a romance of tender interest; the human history, the same heart beating in every breast. Heads bent forward, not a creature stirred. Then, briefly, the essay ended.

Nesta, as white as her graduating-gown, listened to her own lost pages. As in a dream, she heard:

"We have great pleasure in awarding the first prize to Miss Fay Farnham. In each essay we find great merit, but the delicately told romance, so skillfully interwoven, has inclined us toward Miss Farnham's work. We have also much pleasure in presenting the second prize to Miss Nesta Willis."

In the darkness that fell upon a trusting heart, no glimmer of light shone. She had been betrayed by her best friend. It was night. All, save Nesta and the teachers, had gone home. Deep sorrow held the girl as she sat, tearless. The door opened softly. Miss Ritchie came to her side.

"My child! My poor little girl!" she implored. "Why did you let it pass? Why did you not tell us at once?"

"How could I? She was my dearest friend. Oh, Miss Ritchie! Can I ever trust any one again?"

"I knew the work was yours, Nesta, at the first words of the romance. No one else in the school has your way of telling such a tale. You put yourself into it. Fay would never have thought of it. Please let us go and explain, dear, and demand reparation."

"No, Miss Ritchie; please let it pass. It is all wrong, but think of the terrible disgrace! And her mother—she is so delicate, it would kill her. I have no mother—to care. Father will be disappointed, but he will forget."

Miss Ritchie, deeply moved, laid a caressing hand on the bowed head. The touch of love, the heartfelt sympathy, penetrated her inmost being. In an abandonment of grief, Nesta sobbed out her sorrow on the breast of the one whose life had been a great renunciation, and who, in common with all true women, had a motherly heart. Comforted, Nesta's spirit rose from the depths. A gleam of sunshine had dispelled the gloom.

The tragedy was complete; the incident closed. At home again, Nesta gradually recovered her serenity, and tried to forgive. No word came from Fay.

One morning brought a telegram from Mrs. Farnham, saying that Fay was dangerously ill, begging Nesta to come to her quickly. All the old affection revived as Nesta answered the summons. In a few hours she reached the adjacent city and found herself at her friend's door. The mother met her, her delicate form bowed with trouble.

"Thank you for coming, dear. She keeps asking for you. It is her poor head. In her delirium she raves about school and lessons. Something is on her mind that she seems to think you can unravel. Will you try, dear?"

Nesta, in her sweet, impulsive way, put her arms around the mother, striving to comfort her.

"When I told her you were coming, she grew quieter and just now has fallen asleep."

"The doctor says the fever may have been in her system for some time. We think she must have worked too hard for the examinations, and for the beautiful essay that won the prize. Her father and I were so proud of her. We scarcely expected such honors. It seemed unlike her usual work. She must have gained in depth of thought. Still, she did not take any pride in it, seeming to hate the mention of it. We hope everything from you, dear. She loves you so much."

Nesta was greatly troubled. What was her duty? She wanted Fay to redeem herself; she dreaded the blow to the parents. But there was one element that the girl in her inexperience did not fathom—the depths and heights of mother-love, the comprehension of faults and weaknesses, yet the forgiveness that hopes against hope that the truer, better nature will—eventually—conquer. Who can be certain that one reason for family quarrels may not be that very desire to compel one's loved ones to cling to a high standard?

Nesta was scarcely prepared for the change in her beautiful friend. The pretty hair was closely cut, the face flushed and thin.

"Nesta! Nesta! Will you forgive me? Do you hate me? Please tell the teachers!" came in the pitifully weak voice.

"Hush, darling! You must not excite yourself," the mother said, "or Nesta will go away."

But Nesta—loving little Nesta—was on her knees, kissing the sufferer. Her cool little hand was laid on the feverish brow.

"It is all right, darling. Please don't fret. You were getting sick, dear, or it would not have happened."

With the habit of leaning on the gentle friend, Fay grew quieter, seeming to find relief in confession.

The days that followed were full of anxiety, for the sick girl hovered between life and death. Father, mother and teachers forgave fully and freely. Everyone clung to the young friend who inspired hope, forgetting herself for the stricken family.

When at last convaleseenee came a quiet happiness came with it. Fay and Nesta renewed their girlish vows of friendship on a surer basis, on a pledge of mutual help and forbearanee, learning also to look for guidanee where true help may be found.

The matter of the lost pages was fully explained to the college faculty and the prize returned. But—at the urgent request of Nesta—the facts were never made public.

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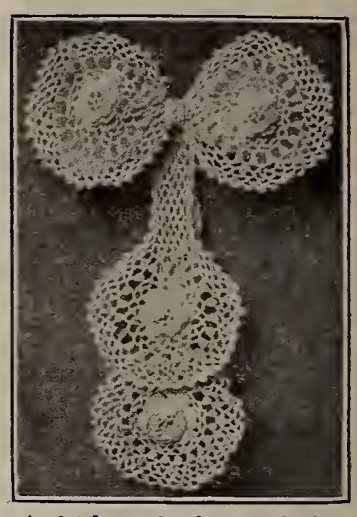
Little Christmas Remembrances

Novelties You Can Buy for Fifty Cents and Less

By Eva May Farlow

Heart-shaped pincushion and emery made of pink Dresden ribbon. Its price is forty cents

EDITOR'S NOTE—We will be glad to tell you just where you can buy by mail these Christmas novelties. Inclose a stamped and self-addressed envelope in your letter to us, and we will give you the desired information by return mail. Don't send the money to us, but wait till you hear from us. Address Gift Editor, Farm and Fireside, Springfield, Ohio.



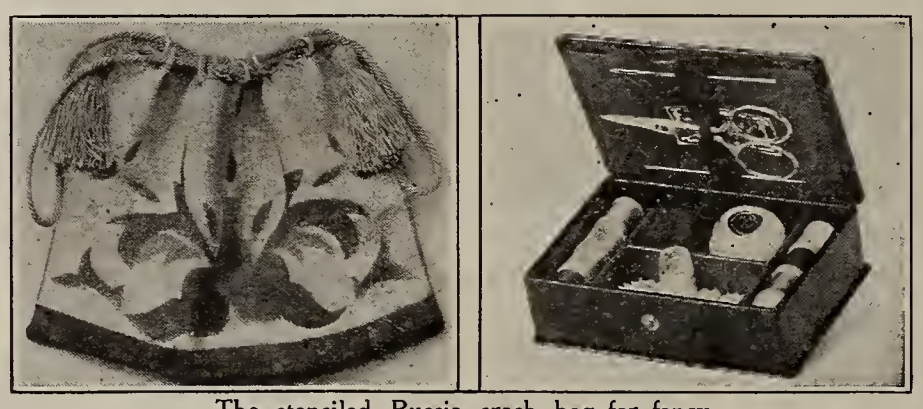
An Irish crochet bow and jabot make an attractive Christmas gift and cost only fifty cents

You have all met the woman who worries and frets incessantly, just as soon as Jack Frost comes whisking along bringing the holiday season with him. She invariably puckers up her brow and wonders how she will ever find time to make so many Christmas gifts. Of course, she wants to remember every one—but how can she find time to send her friends a gift over which her own willing fingers have spent hours of tedious work? She is the woman who feels that a home-made gift is more appreciated. What a good thing it would be if she would try to see the Christmas spirit in another light. Generally a hand-made gift is more appreciated, but isn't the giving of Christmas gifts prompted by the love one has for one's friends? So it's just the thought after all that counts, isn't it? Don't sit down and fret and worry and lose the Christmas spirit, because you are pressed for time. If you don't have time to make all your gifts, buy them ready-made.

"But the ones in the shops are too expensive," you say. Perhaps they are, some of them, but these here pictured cost no more than fifty cents, while some cost as little as ten cents.

For the woman who sews, what could make a more appropriate gift than the pincushion or tape-measure or the little thread-waxer? The little brass pig tape-measure is a decided novelty. The tape pulls out underneath, and to get it back again all you have to do is to give his perky tail a twist, and in goes the tape.

The girl or woman who likes to do fancy work generally wants an attractive work-bag, and the one here illustrated would delight the heart of any enthusiastic needlewoman. It is made of Russia crash, and the front is decorated with a three-color stenciled design. The bag could be made to look quite oriental by outlining the design in fine gold thread.



The stenciled Russia crash bag for fancy work costs only fifty cents, and the complete little sewing-box, made of imitation green leather, can be bought for forty-two cents

A unique thread-waxer which looks like a small pear. Price is ten cents

It draws together with gray cord run through white bone rings.

The girl who has a craze for dainty neckwear is sure to appreciate the Irish crochet jabot. The bow and jabot can be purchased separately and cost twenty-five cents each.

The sewing-box would make an appropriate gift for the woman who travels—or would be equally suitable for home use. It is such a compact little sewing-box and contains spools of colors, scissors, needles, thread in different pins, darning-cotton, thimble and bodkin. The box is made of imitation dark green leather. The top closes with a flap which clasps over the front.

Necklaces seem to keep in favor and the young girl of to-day is not willing to push them aside and dub them "old fashioned." They give a certain smart touch to a high-necked shirt-waist, and in all probability will keep right on being worn. These daisy chains are most charming—they come in nearly all the delicate colors—and cost but fifty cents.

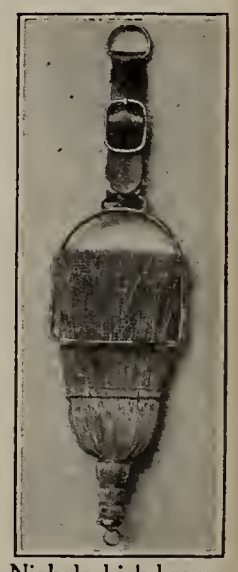
When the pocket-book is slender and one has a large number of friends to think of, one must look for something that is inexpensive. But just because it must be inexpensive is no reason why it should be a gift that is useless or inappropriate. Two things that the economical woman should always bear in mind are the appropriateness of the gift and the usefulness of it.

The burnt wood calendar has both these qualities. It is a Christmas novelty, but at the same time it is useful and appropriate. It would be a hard matter to find anything that would be much better for ten cents. It has originality of its own, it is artistic in design and is really something quite out of the ordinary in calendars.

As a rule it is much easier to know what to give a woman than it is to know what to give a man. He generally has everything from a match-safe to a collar-box. However, in buying a gift for a man it is always well to choose something that is useful or else it will get poked away in his bureau drawer and only be a source of annoyance to him. If you want to remember your father or brother with some little gift, keep your ears and eyes open and see if you can't discover what he specially wants. Perhaps he may need a new wallet. The one here pictured is most good looking. It has a place along the back for bills and it contains a memorandum-book, with a compartment on each side for cards or stamps, etc. This one costs only forty-nine cents and is sure to make a very acceptable Christmas gift.

A daisy bead necklace made of black and white beads. It also comes in many pretty colors such as blue and white, red and white, green and white and costs fifty cents

The whisk-broom holder is another good Christmas gift for a man. It is made to simulate a stirrup, and the holder depends from a brown leather strap with a ring at the top to hang it up. The holder and whisk-broom can be purchased for forty-nine cents, surely a very little money for such a good-looking and serviceable article.



Nickel whisk-broom holder, including whisk-broom, in the form of a stirrup. Price forty-nine cts.

Perhaps one of the greatest pleasures in preparing Christmas surprises is the wrapping up of the gifts. A gift looks so much more attractive if sent in a pretty box neatly wrapped in white tissue paper and bright ribbons.

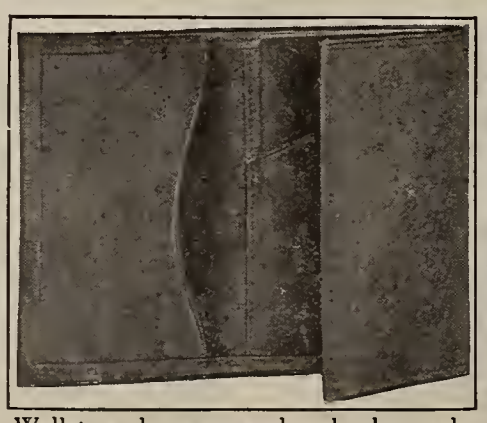
This year there are any number of new Santa Claus stamps and stickers, for the outside of packages. Then there are different kinds of labels—some of which read, "Please do not open until Christmas."

Something quite novel in the way of a tape-measure. The little brass pig, tape and all, can be yours for the small sum of twenty-five cents. It makes an unusual Christmas gift

For a girl who is clever at making rhymes it would no doubt afford her a great deal of enjoyment if a little verse accompanied any novelty that she might send. For instance, the following might be a suggestion for a verse to send with the pig tape-measure:

Here's a piggy that can count
Up to thirty-six.
Pull the tape out, wind his tail,
For piggy never kicks.

As you give your thoughts up to it, lots of clever ideas will come to you, and you will find it most amusing to write these nonsense jingles, and also they will please the recipients by giving the gifts an air of individuality.



Wallet and memorandum-book made of black goat seal. It is a combination card-case and bill-fold, and costs the very small sum of forty-nine cents

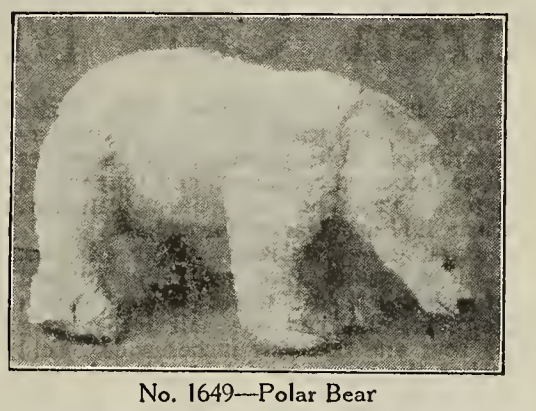
Calendar and thermometer, mounted on a burnt wood frame in daisy design, with appropriate holiday greetings in old English letters at the bottom. Price ten cents

Christmas Toys for Children

Home-Made Gifts to Make the Little Folks Happy

No. 1652—B'rer Rabbit

Pattern cut in one size. Quantity of material required, one fourth of a yard of white cotton plush thirty-six inches wide and one fourth of a yard of brown plush, with two black shoe-buttons for his little eyes



No. 1649—Polar Bear

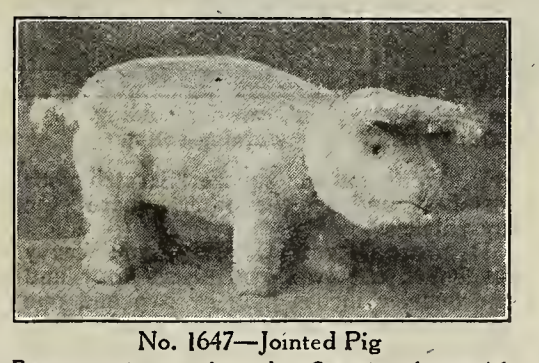
Pattern cut in one size. Quantity of material required, five eighths of a yard of thirty-six-inch material, with a small piece of chamois for four paws and buttons for eyes. White fur is good material to use

No. 1653—Gray Squirrel

Pattern cut in one size. Quantity of material required, one half yard of thirty-six-inch gray plush, with a small piece of white for under body and buttons for eyes. A bit of fur would make a lovely tail

No. 1648—Red Fox

Pattern cut in one size. Quantity of material required, three eighths of a yard of thirty-six-inch dark material, one fourth of a yard of white material, two buttons for eyes and a little embroidery-silk for the nose



No. 1647—Jointed Pig

Pattern cut in one size only. Quantity of material required, one half yard of thirty-six-inch material, with two buttons for eyes and a piece of pink velvet for the snout. Use pink canton flannel to make the pig

OF COURSE, it isn't a bit too early for Christmas suggestions. And here is one which is sure to appeal to every mother who has many little folks in her family. She wants her children to have the happiest sort of a time at Christmas and yet she has but a little money to spend for gifts.

On this page are illustrated some very up-to-date stuffed animals and also a rag doll and many fashionable clothes for the rag doll and other dollies as well.

In the shops this year stuffed animals are among the most popular of the Christmas toys and never, never have they been so real looking. Now, with the help of a ten-cent WOMAN'S HOME COMPANION pattern, mother can make any of the stuffed animals who have had their pictures taken for this page.

One is not apt—that is, if one is grown up—to look upon a pig as lovable, but the little soft, pinky-white pig who is pictured on this page, is pretty sure to be loved by any child who receives it on Christmas morning. Then there is B'rer Rabbit, sitting up in such a cute way. He would make, with his long silky ears, just the finest sort of a Christmas present. The fox and the polar bear and the dear little squirrel, with his lovely tail, all have attractions of their own. Plush, a bit of fur, Canton flannel or a scrap of velvet can be used for making the animals.

If the pattern is followed very closely, these animals are not hard to make. If you can, have the color of the material that you use in making the animal as near the color of the natural animal as possible.

AFTER all, there is nothing like a "really truly" rag doll to make any dear little girl happy. The rag doll illustrated on this page, with some nice sensible clothes, makes a very sensible little Christmas gift.

The patterns for the rag doll and a middy suit for the doll illustrated on this page can be purchased for ten cents. Printed on the pattern envelope is a clear description of just how to make the doll. However, the rag doll's features—that is, whether she is good looking or otherwise—will depend very much upon mother. The face may be painted or the features delicately worked in with embroidery stitches, while soft worsted always makes very satisfactory hair.

If a new doll is not needed this Christmas, perhaps the doll which your little daughter already has may need some new clothes. If so, any of the doll's dresses here pictured would make a nice Christmas gift. For a girl doll there are patterns for a school dress and school apron, while for a very little girl doll there is the daintiest sort of a dress and a coat and a lovely fur set. There are also patterns for two nightgowns for dolly and a housework dress and a fine, practical apron for a lady doll.

If little daughter does not own a lady doll, but has a doll with hair that she can put up, this doll will do for a grown-up lady and look exactly like one if she will only wear these clothes.

All the patterns illustrated on this page sell for ten cents each. Order from the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City.

No. 1665

No. 1665—Doll's School Dress and Apron

Patterns cut for dolls 14, 18 and 22 inches high. Material required for 18-inch doll, three fourths of a yard of thirty-six-inch material, with one fourth of a yard of contrasting material for the apron and one yard of thirty-six-inch material for the dress. Of course, Dolly at some time in her life should go to school, so here is a nice little outfit for her to wear

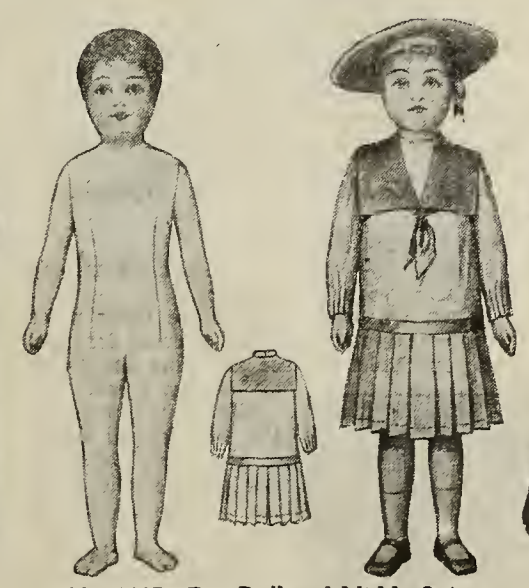
No. 1668

No. 1668—Doll's Fur Set, Coat and Dress

Cut for dolls 14, 18 and 22 inches high. Material required for medium size, or 18-inch doll, one fourth of a yard of thirty-six-inch material for fur set, five eighths of a yard of thirty-six-inch material for coat and five eighths of a yard of thirty-six-inch material for dress, with one eighth of a yard of inserted tucking for yoke or all-over lace

No. 1666—Doll's High and Low Neck Nightgowns

Cut for dolls 14, 18 and 22 inches high. Material required for medium size, or 18-inch doll, one half yard of thirty-six-inch material, fine lawn or nainsook for low-neck night-gown and five eighths of a yard of thirty-six-inch material for high-neck one, with one fourth of a yard of inserted tucking for yoke



No. 1667—Rag Doll and Middy Suit

Cut for dolls 14, 18 and 22 inches high. Quantity of material required for the rag doll in medium size, or 18 inches tall, three fourths of a yard of thirty-six-inch material. For the middy suit, one yard of thirty-six-inch material, with one fourth of a yard of contrasting material for trimming. Navy blue serge with a white linen dicky would make a very smart-looking middy suit

No. 1669—Lady Doll's Housework Dress and Apron

Cut for dolls 14, 18 and 22 inches high. Material required for medium size, or 18-inch doll, one yard of thirty-six-inch material for dress and five eighths of a yard of thirty-six-inch material for apron. A lady doll, of course, wants to be industrious, so you will need these patterns for her housework clothes

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The Worthmore Guarantee protects you absolutely. Should you, for any reason, not be perfectly satisfied with your mattress in every respect, during your two months' trial, you may return it at our expense and we will promptly return every cent you paid us without question, quibble or comment. We guarantee to please you and if we were not perfectly reliable, "Farm and Fireside" would not accept our business. So send us the measurements of your bed; attach check, postal or express money order, and we'll send your mattress same day all transportation charges prepaid. Full size mattress (4-6x6-4) costs $9.85; smaller sizes proportionate low prices. *Send for illustrated folder and tick samples.* You'll be under no obligation to buy. Write name and address plainly.

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My Pony Boy	I've Got Rings on My Fingers
Red Wing	Down in Jungle Town
Just Some One	I Wish I Had a Girl
Red Head	Yip-I Addy-I-Aye
Star of the East	By Light of Silvery Moon
Oh! You Kid	Sweet Bunch of Daisies
Senora, *A Dandy*	Silver Threads Among the Gold
Smarty, *Kid Song*	My Wife's Gone to the Country
Baby Doll	That's What the Rose Said to Me
Dreaming	Put On Your Old Grey Bonnet
Are You Sincere	Way Down in Cotton Town
No One Knows	Isn't That Enough For You
Honey Boy	I Remember You Napanee
Daisies Won't Tell	I'm Bringing Up the Family
Molly Lee	Be Jolly Molly, *March Song Hit*
Beautiful Eyes	Lonesome Taffy
Always Me	The Land of To-Morrow
That Italian Rag	Cubanola Glide, *Great Hit*
Garden of Dreams	I Love My Wife But Oh You Kid

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Sicilian Chimes, *Reverie*	Frog Legs, *Rag*
Let Er Go, *March*	Love Sparks, *Waltz*
Rainbow, *Two Step*	Moon Winks, *Three Step*
Star of Sea, *Reverie*	Maple Leaf, *Rag*
Morning, Cy, *Barn Dance*	Beautiful Star of Heaven
Turkey in the Straw	Ben Hur Chariot Race
Red Wing, *Two Step*	Kerry Mills Barn Dance
Red Head Rag, *A Hit*	College Life, *Two Step*
Curly, *Two Step (New Hit)*	Rose Song, *Reverie*
Burning of Rome, *March*	Princess Royal, *Caprice*

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The Eddystone Mfg. Co., Philadelphia
Established by Wm. Simpson, Sr.

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Gifts That Children Can Make

Corner book-mark of colored cardboard paper

THIS page of Christmas articles will surely interest the boys and girls in their holiday gift planning and work.

Most of the things can be made as readily by a boy as by a girl and there are gifts shown which will please any grown-up member of the family.

THE CORNER BOOK-MARK is a useful little article for the grown-up person when reading, and just as useful for the school boy and girl to mark the lesson-place daily.

Cut a piece of colored cardboard paper four inches by two inches. Fold down two points on one long side to meet center of other long side. With needleful of raffia, sweet grass or mercerized cotton floss, sew the two short meeting sides together, making two cross-stitch squares, like picture. Tie ends in small bow.

THE TWINE-CASE will please either father or mother. It is so nice to always know where to find tie-string when wrapping bundles.

Cut a strip of silk, cretonne or denim that measures eighteen inches long and four inches wide. Sew short ends together. Cover two small brass rings with buttonhole stitching or blanket stitch, using mercerized cotton or silk floss to match strip of material. Or wind floss over and over each ring until it is completely covered.

Turn under one quarter of an inch on one edge of material, run gathering thread (double) and draw it in until it is just large enough to fit around ring, then fasten off. Sew material to ring. Place ball of twine inside material. Be sure to loosen one end of twine. Allow end of twine to drop through lower ring. Gather other edge of material in same manner and sew to ring.

Make small bow from one half yard of ribbon (one inch wide). Sew bow across lower opening. From one yard of ribbon make two smaller bows—one at each end of ribbon, with long plain piece between, about fifteen inches. Sew bow to each side of upper ring. This will make the plain piece of ribbon form a loop by which the twine-bag can be hung.

A NEEDLE-BOOK is always a welcome gift. Cut a piece of black cardboard paper seven inches long and three and one half inches wide. Fold in two squares. Cut piece of flannel six inches long and three inches wide. Place flannel inside of folded cardboard. Thread large-eyed needle with twelve inches of baby ribbon. One inch from top edge of outside of case sew through case and flannel and back again near the bottom of case. Tie at the back with tiny bow. From green paper cut four small holly leaves. Paste on cover, as in picture. Cut out small holly berry from red paper. Paste on center of cover.

PICTURE-FRAME—Materials: One and one quarter yards of fancy edged ribbon one half inch wide. Cut circle of cardboard three inches in diameter. From its center cut smaller circle one and one half inches in diameter. From sheet cotton cut a piece the same shape as the centerless circle, but slightly larger. Place cotton upon cardboard. Then evenly and tightly wrap ribbon over and over rim of circle. Fasten with needle and thread at end. Attach small strip of ribbon across back to hold picture in place.

HANDKERCHIEF-CASE—Cut nine-inch square of cardboard paper. Fold four corners down to meet at center of square. Then fold back four corners to touch sides. Cut twelve holly leaves from green paper and four berries from red paper. Paste on corners like picture. Place handkerchief in center of case.

FANCY CALENDAR—Cut a piece of colored cardboard paper seven and one half inches long and six inches wide. Make small picture with crayon (or water-colors) on white paper, which measures three inches up and down, and four inches across. Paste on top half of calendar. Paste 1911 calendar on lower half.

PIN-CASE—Materials: Paper of pins, black and white; three quarters of a yard of ribbon one inch wide; piece of ribbon (or silk) five and one half inches long by four and one half inches wide. Fold ribbon the long way (right side in); sew side edges together. Turn case right side out. Fold inward top edges of ribbon until case just holds paper of pins. Make small bow at each side of case with section of ribbon in between for hanging.

BOY MATCH-SCRATCHER—Cut from red flannel or felt hat, a pair of trousers and a pair of shoes. Sew black beads to shoes for buttons. Cut from white flannel or felt a one-piece shirt and sleeves; also legs from shoes to trousers. Cross two pieces of ribbon for suspenders and sew on two buttons. See picture. Cut two small squares of sand-paper. Paste on trousers. Write on one square "Scratch your matches" and on the other square "On my patches."

DARNING-COTTON CASE: From heavy cardboard cut two oval pieces four and one quarter inches long by two and one quarter inches wide. Cover each piece with cretonne. Place white and black spool of darning-cotton side by side between covered cardboards. Punch holes through pieces, so that ribbon can be run through cardboard and spools and cardboard, and tied in a bow.

WORK-BOX—Materials: Three eighths of a yard each of flowered and plain material; two yards of baby ribbon. Cut two circles, each twelve and one half inches in diameter, from both plain and fancy material. Sew one plain and one fancy piece together. Place the finished circles together, plain sides in, first placing a six-inch circle of cardboard in the center between them. Stitch by machine all around this circle of cardboard. (Feather-stitch or chain stitch by hand.)

Divide the circle in quarters, then those quarters in half; stitch from edge of cardboard center to outside rim. This separates circle into eight compartments for various sewing articles. Cut ribbon into eight parts; attach one edge of it at each outside row of stitching. Tie all together at center. If cord is used, just tie in one great knot.

Other gift articles will suggest themselves from the ones here described.

For instances, the book-mark can be made of very heavy cardboard paper and used as a book-protector. Of course, there will have to be four protectors to the set, to shield the corners of the book.

The darning-case can be made smaller and used as a sewing-silk case, with black and white spool silk.

If you have a dear old grandmother who does the weekly darning for the family, then give her a darning-case. She will more than appreciate it when she knows that you made it especially for her.

The cover of needle-book can be made larger, filled with thin paper and used as a shaving-pad.

Such a gift would be appropriate for your father or big brother.

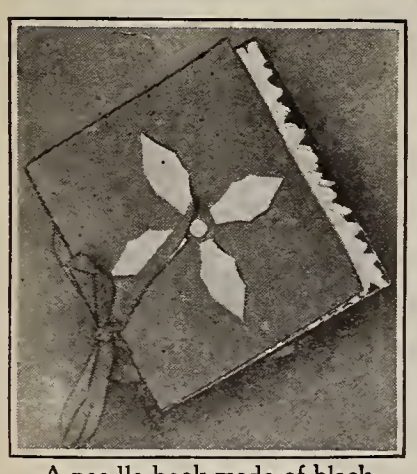
A piece of sand-paper can be pasted on the colored cardboard instead of calendar.

A ribbon case for holding mother's twine

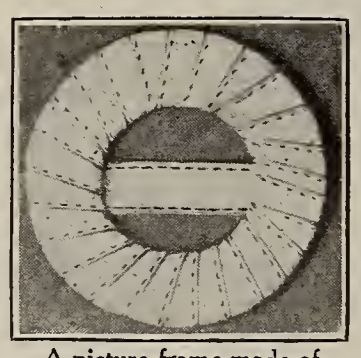
Ribbon case for holding paper of pins

Boy match-scratcher of red and white flannel

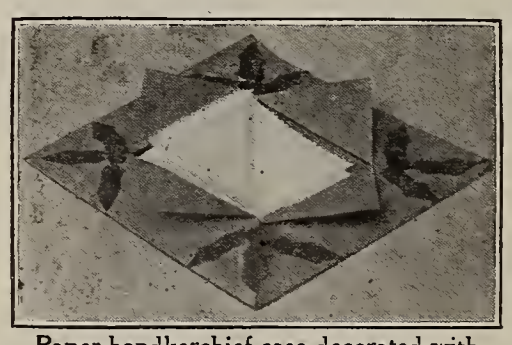
A case for holding darning-cotton



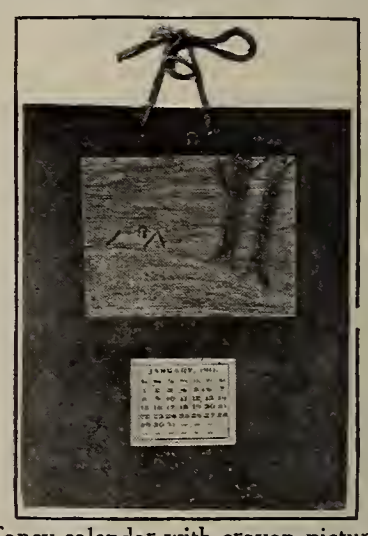
A needle-book made of black cardboard paper



A picture-frame made of fancy edged ribbon



Paper handkerchief-case decorated with green paper holly leaves



Fancy calendar with crayon picture mounted on colored cardboard

Cousin Sally's Letter

DEAR BOYS AND GIRLS:—

You see you were not forgotten when we editors were planning the Christmas suggestions for grown-ups. We have given you some clever ideas for Christmas gifts, too, and they are all so easy to make that I know you will not have any trouble with them. It is not a bit too soon to think about Christmas. One month more and jolly old St. Nicholas will be coming along with his big pack of Christmas toys and goodies. He is a wise old man because he allows himself a whole year to prepare his gifts for good little children. So you want to be prompt, too, and not leave everything until the last minute.

I feel quite sure that you boys can easily make the book-mark, needle-book, match-scratcher, calendar and handkerchief-case. They are really not a bit hard and the directions are so plain that you simply can not go wrong. To those of you who are clever with the paint-brush I would suggest that you make your own picture for the calendar instead of clipping one from some magazine. The one here pictured was made by a little girl in the lower grade in school and I think it is very good work for one so young. If she made it, you can make it, too, so don't be afraid to try. The gifts are all most inexpensive and yet most useful. Your friends can't help but appreciate a gift which you yourself have made. The little picture-frame is sure to delight your school-teacher, especially if it contains a picture of yourself. Do let me know what success you have in making the gifts, for I would love to hear all about the little surprises that you are planning for your loved ones.

I was glad you were so interested in the puzzles in the October 25th issue. I had planned to print the answers in November 10th, but there was not room enough, so I was obliged to hold them over until this time.

I wish all of my club members would write and tell me how they are getting along. I am just as much interested in your work as you are yourself and want to keep in close touch with all of my club members and my little friends who read this page of ours. With love to all,

COUSIN SALLY.

Christmas

JOLLY old Santa Claus
Soon will be here,
Bringing along with him
Christmas cheer.

Bringing us dolls
And books and toys,
And everything nice
For girls and boys

Down the chimney
Soon he'll go,
And fill the stockings
From top to toe.

MABEL FOX, Age Nine.

A work-box with eight side pockets

The Letter-Box

DEAR COUSIN SALLY:—

I did not think the pin you sent would be nearly so nice as it is. I think it is just a beauty. I am glad to say that I am a member of Cousin Sally's Club.

I like animals, so I don't think that I would see them abused if I could help it. I will try to make everything cheerful about the house and always tell the truth.

Your cousin,
MARY E. HUGHES, Hagie, Wyoming.

DEAR COUSIN SALLY:—

I will tell you a little about my trip to Nebraska with my mother.

When we first came where there were no mountains and rocks it seemed strange, for you could not see anything but fields and a few trees.

When we crossed the Mississippi River it was very low. I got some shells from its banks to bring home.

We stayed in Nebraska about two months.

I saw real Buster Brown while I was there. He is fifty years old, forty-one inches tall and he just looks like his picture. I also saw Tige, but Buster had only had him three years. I did not see his wife, but Buster said her name was Mary Jane and she is only one inch taller than Buster.

When we came home we had to stay in Chicago all day.

In the afternoon I went out in the city and saw lots of large buildings.

We got home safe and sound.

Your cousin,
IDA M. BAILEY, Age Thirteen, Pyle, Pennsylvania.

Cousin Sally's Club

WE STILL have enough club buttons for every boy and girl who wants one. Join the club to-day. The button of membership costs only five cents and with it goes a long letter telling the club's motto and just what is expected of members. Be sure to state your age when writing for a button, for the club is only for boy and girl readers who are seventeen years of age and under. Address Cousin Sally's Club, FARM AND FIRESIDE, 11 East 24th Street, New York City.

Answers to Puzzles

1, Rhode Island; 2, Tennessee; 3, Virginia; 4, Colorado; 5, Washington; 6, Georgia; 7, Indiana; 8, Maryland; 9, New York; 10, Florida; 11, North or South Carolina; 12, Pennsylvania; 13. Illinois; 14, New Jersey; 15, Ohio; 16, Oregon; 17, Maine.

Our Puzzle School

Conducted by Sam Loyd

To Be Found on the Farm

How many well-known articles can be discovered in the following sentences? Each sentence conceals two or more articles.

1. I asked over the telephone yesterday, but could not then be answered.
2. He is a big and erratic owner of ranches who uses a boat-load of mush a day.
3. After picking every sixth or seventh row he ate the berries himself.
4. Phillip, ignoring advice, goes along slam bang.
5. "Yes, Cy, them's my sentiments," said Josh Billings, "the more a person talks, the less he says."
6. He would not give me a dower, so the affair is off, although I made him a reasonable offer.
7. Her ashes repose in a rich urn, so it was almost a blessing that she died when she did.
8. An eccentric rope-dancer was pirouetting on the porch arduously without a smile on her face.
9. They begged so well that at last I lent them a dollar, dividing it between them both.
10. Pa's tureen was full of soup, so he got a stiff arm handing it out to the hungry ones, especially to ma to serve.
11. He gave his little sister a keepsake, but terrible thoughts of locksmiths and burglars disturbed her dreams.
12. When the champions are in the box they play for blood and pitch for keeps.
13. For a sick Leghorn I would not recommend rhubarb, arnica or much arrow-root, as I hope a simpler remedy may be found.

A Clever Word Puzzle

"How you was, Mr. Rastus Johnsing? Late spring we am havin'!"

"Dat's so, Mandy; when de sausage comes out of his hole an' sees his shadow he goes back for another nap."

"Don't know what you talkin' 'bout, nigger; it's de ground-hog what looks at his shadder."

"That's what I said, Mandy; isn't sausage ground-hog?"

"You think yerself mighty smart, Mister Johnsing. I thought you were dead gone on chicken, but I guess it's for———"

Now who can guess the name of the animal that will complete this sentence?

The Price of Eggs

This odd little problem in domestic arithmetic was sprung by the cook upon Mrs. Smith when she wanted to know what the grocer charged for such small eggs. "I paid twelve cents for the lot," replied Bridget, "but I made him throw in two extra ones, because they were so little, and you see that made them cost just one cent a dozen less than his first asking price!"

How simple and natural the whole transaction sounds, just as it might occur at home, and yet how many of our clever young puzzlists can solve Bridget's problem by telling just how many eggs she received for her twelve cents? It is a pretty problem, which would only be spoiled if the terms were changed or made more complicated.

Concealed Geography

See if you can find all the names of the towns, countries, rivers, etc., which are hidden in the following sentences.

163. I am decided to go at *last, or I am* not in my right mind.

164. Neither men, butterflies, *nor angels* can sew on a button.

165. A man took his soft soap to *Sebastopol, and* hence to his castle in the air. (Country.)

166. *Anna's sausages* are the very best I ever ate.

167. A Jewess went to *Cuba that* loved Henry the 8th.

168. If you carry into a *room a half* dozen oysters, they will blush like a rainbow.

169. If any one *stabs a rat, O, gather* up the fragments.

170. My sister had a fall by which she was *lamed for days.*

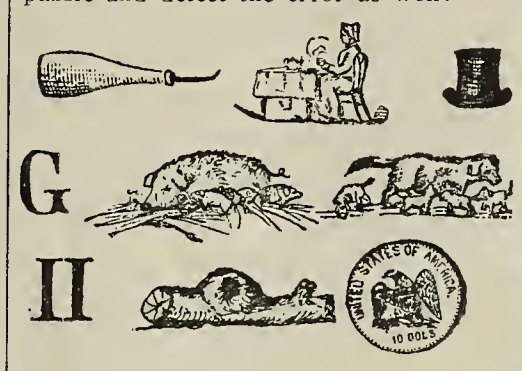
171. The *country everywhere* about here is very green.

172. We shall have nice nut and raisin cake for tea.

173. Do you like all of your poetry in Iambic or in the Trochaic meter?

Old-Time Rebus

Here is another old-time rebus by Franklin which might well be termed a "blunderbuss," for, while the answer to the puzzle is all right, Poor Richard has made a grammatical error which constitutes quite a bull. Can you decipher the puzzle and detect the error as well?



A Rebus

My first's the heart of honest trade,
When 'tis judiciously displayed;
But when 'tis of its head bereft
It then becomes a public theft.

Riddles

Why is a very old umbrella, that has been lost, as good as new when found? Because it's recovered.

How did the whale that swallowed Jonah obey the divine law? Jonah was a stranger and he took him in.

Which is the oddest fellow, the one who asks a question or the one who answers? The one who asks, because he is the querist.

I went into the woods and caught it, I sat down to look for it and then I went home with it because I could not find it. A splinter.

When is the soup likely to run out of the saucepan? When there's a leek in it.

What is it that from which the whole may be taken, and yet some will remain? The word wholesome.

Which is easier to spell—fiddle-de-dee or fiddle-de-dum? The former, because it is spelt with more e's.

What is the difference between a piece of honey-comb and a black eye? One is produced by a laboring bee and the other by a be-laboring.

"Can any pupil give a word which contains all of the vowels?" asked the teacher. "Unquestionably" replied a bright little miss who stood at the head of her class. "But I can give you two words, each of which show the vowels in regular order." What were the words?

A Charade

My first presents an honored female name,
But lovingly abbreviated;
My next a man's, and treated just the same.
Now if this couple were but mated
And to the altar duly led,
To be my whole which might be said.

Answers to Puzzles of September 25th

The following blackboard shows the manner of dividing the two forms into four pieces:

Franklin's rebus puzzle says: A chin well rounded is a charming feature. (H in well round ed, is H arm in G feet ewer.)

Johnny got a box on the ears!

The rebus is spark.

The charade: Evil, Vile, Live, View.

Somewhat Mathematical.

147 votes were cast; on the first count the affirmative vote was to the negative as 4 is to 3. When 11 were changed, the negative had a majority of one vote.

Concealed Geography: 102, Annapolis; 103, Arles; 104, Oregon; 105, Chester; 106, Pan; 107, Gath; 108, Maine; 109, Hague; 110, Utica; 111, Boston; 112, Omaha; 113, Glasgow; 114, Utah; 115, Dan; 116, Stoneham; 117, Syria; 118, Modena; 119; Parma; 120, Milan; 121, Perugia; 122, Magdeburge; 123, Cyprus; 124, Leeds; 125, Candia; 126, Corea; 127, Goshen; 128, Greece; 129, Berne; 130, Georgia; 131, Pultova; 132, Macon.

A prize puzzle book will be sent to the fifty readers sending the best answers to Sam Loyd, Box 826, New York City.

When answering the puzzles be sure to tell what books you have received so as not to receive duplicates.

Astonished Her!

HERE'S a beauty recipe: Take a pinch of Pompeian; rub it on your moistened face and well into the pores. A few more moments of massaging—and lo! out comes the cream many shades darker than when applied. You are astonished! You never suspected that so much deadly dirt could stay in your skin despite soap-and-water scrubbing.

A glance in your mirror further astonishes you. The old sallow, "dead skin" appearance has gone, and in place of that drawn, tired-looking skin, is one that has the freshness and smoothness of perfect health and youth. "When first I used Pompeian," wrote a woman, "I was as astonished as at my first Turkish bath." The pore-dirt that comes out will astonish *you*, too.

Beauty comes from *skin health*. Pompeian keeps the pores clean, and thus promotes *skin health*. Resolve to-day to preserve and promote your beauty. Trial jar sent for 6c.

POMPEIAN
Massage Cream
All dealers, 50c, 75c, $1

Art Panel Offer:

Our lavender and gold 1911 Art Panel is 3 feet high and 7¼ inches wide. So great and persistent has been the demand for this "Pompeian Beauty" that we have had as many as 75,000 orders in the office at one time, and were forced to order edition after edition. Each copy of "Pompeian Beauty" goes through the press fifteen times in order that her original beauty may be faithfully reproduced. No advertising on the front of the panel—only the artist's name plate as you see in the picture. Sent for 10c in coin or stamps.

For 16c we will send a trial jar of Pompeian Massage Cream and "Pompeian Beauty." You may order either or both. Money gladly refunded if you are not completely satisfied. Clip the coupon now before you forget it.

If your dealer can't supply you we will send Pompeian prepaid upon receipt of price, 50c, 75c and $1.00.

THE POMPEIAN MFG. COMPANY
100 Prospect St., Cleveland, Ohio

The Pompeian Mfg. Co., 100 Prospect St., Cleveland, O.

Gentlemen:—You will know by the amount I enclose (coin or stamps) whether I wish a trial jar of Pompeian (6c), "Pompeian Beauty" (10c) or both (16c).

Name .....

Address .....

City ..... State .....

CHRISTMAS OFFER

These Exquisite Imported 25 Cent HANDKERCHIEFS 25 CENTS EACH 6 for 79c

SILK Stockings 50c
3110. Made of good quality silk. Double heel and toe. Makes a pleasing Gift. Sizes 8½ to 10.
3 pair for $1.39

A trade opportunity brought us several thousand dozen at half price just when you most want handkerchiefs for gift giving or personal use. All of dainty sheer Swiss lawn, beautifully embroidered in choice hand-work patterns—exquisite examples of "hand-loom" Swiss peasant work. They would be considered cheap at 25 cents each.

Sold Only by the Half Dozen One of each pattern, postpaid 6 for 79c

Money Back if You Are Not Satisfied.

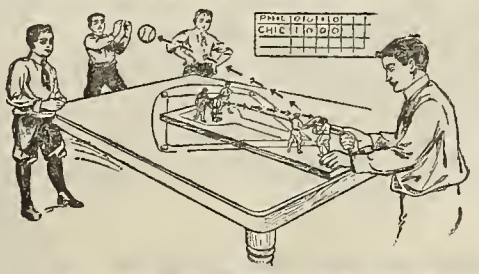
STANDARD MAIL ORDER CO.
252 WEST 17TH STREET, NEW YORK

Write for a year's free subscription to the STANDARD STYLE BULLETIN
New York's leading Fashion Guide
Write TO-DAY.

BASE BALL AT HOME The J. & D. Base Ball Game

THE MOST FASCINATING IN-DOOR GAME EVER CONCEIVED

The ball is thrown by a pitcher and batted by a batter. Flies through the air in every imaginable direction. Sensational one-hand stops. Pick-ups and line drives occur while playing this Game.



Can you imagine any effort more fascinating, any exercise more beneficial than the endeavor to CATCH A BATTED-BALL?

You do not sit quietly and watch a ball roll around a groove. You ACTUALLY CATCH IT. You do not spin a dial and read that you have made a hit. YOU HIT A REAL BALL WITH A REAL BAT.

The physical advantages of Base Ball within the limits even of a small room.

Substantially built and guaranteed to be as represented. Sent direct to any address on receipt of price, $3.00, Express Prepaid.

THE JORDAN & DEAN CO.
156 Nassau Street Tribune Building, New York City

A SURE WAY to SAVE MONEY

If you asked your grocer, would he give you a fine upholstered spring seat Rocker or a Golden Oak Chiffonier every time you bought $10 worth of him? No, of course not. But we do right along. For example, we give the Rocker shown here. **Highly finished, made of oak, with quartered front and arms. Seat 19x21 inches. Upholstering is of good imitation leather.** Our Factory-To-Home Plan does away with all middlemen's profits on **SOAPS, BAKING POWDER, TEA, COFFEE, SPICES, PORK AND BEANS, HOMINY, NOODLES and over 350 staple articles** of every day family use. You get these supplies direct from our factory at factory cost, or if you prefer, you may take

Your Choice of Any Kind of Furniture

as your saving. Mrs. Nicols of Barstow, Texas, says: "Your goods have that sweet smell of being fresh, and the premium is splendid." Testimonials like this received every day. You will say the same. Over 1,500 premiums given with our products. Lace Curtains, Rugs, Silverware, China, etc., as well as Furniture. Everything guaranteed to delight you or money refunded. 30 days free trial. Send for big new catalog and **free sample of fine soap.** Please send today, if only out of curiosity.

Given with $10 Order

CROFTS & REED CO., Dept. A872, Chicago, Ill.

50 Christmas Post-Cards
Absolutely Without Cost

Every FARM AND FIRESIDE reader can obtain 50 beautiful Christmas post-cards absolutely without cost. They are the most beautiful post-cards you ever saw. They are all different. Each card is in twelve colors and is handsomely embossed in gold. An appropriate Christmas picture and a verse containing a pretty Christmas sentiment adorns every card. Never was there such a big collection of handsome post-cards. Everybody now sends Christmas post-cards to all their friends. These cards will make a fine addition to any collection of post-cards. Children will love the pretty pictures, the gay Christmas colors and the sweet verses of Christmas sentiment.

FARM AND FIRESIDE has spent a great deal of money in getting this big package of beautiful Christmas cards for our readers. They will bring Christmas cheer to you and your family and your friends. And you can get the entire package of 50 cards absolutely without cost. We want every FARM AND FIRESIDE family to have the cards. That is why we are going to send them to you without cost.

The beautiful set of 50 post-cards will be inclosed in a handsome colored box. The package will be carefully packed and mailed to you, with all postage charges fully prepaid by FARM AND FIRESIDE. Here is our great Christmas Post-Card Offer; the most liberal and generous offer ever made by a paper to its readers. This offer will soon be withdrawn. It is good

Until December 20th Only

Christmas Offer No. 2.

Send $1.00 for one subscription to Farm and Fireside for three years (to one address). You will receive the big box of 50 Christmas post-cards without cost, postage prepaid. You will also get the beautiful 30-inch 1911 Beauty Calendar free.

Christmas Offer No. 3.

Raise a club of three Farm and Fireside subscriptions for one year each. Send us the three subscriptions with $1.00. We will send you the box of 50 Christmas post-cards, postage prepaid. Each of these subscribers will also receive the beautiful 30-inch 1911 Beauty Calendar without cost.

The subscriptions may be new or renewal, one of them may be your own. If your own subscription has not yet expired it will pay you to renew now in advance in order to take advantage of these great offers.

A Fine Christmas Present

FARM AND FIRESIDE will be a handsome and useful Christmas present for you to give your friends. Your friends will enjoy it and appreciate it. In no other way could you get so valuable and handsome a Christmas present for the money. Send $1.00 for your own subscription and for the subscriptions of two friends. (Our Offer No. 3.) Each friend will receive the 1911 Beauty Calendar, in addition, on Christmas Day. You will also receive the calendar with your own subscription and you will further receive the box of 50 Christmas post-cards. All this for only $1.00.

The Big Christmas Number

The friends to whom you send FARM AND FIRESIDE will receive the great Christmas number of FARM AND FIRESIDE, which will be published December 10th. This big handsome number will be sent only to **paid-in-advance** subscribers. If your own subscription has run out, send in your renewal now in order not to miss this great Christmas number of FARM AND FIRESIDE. It is full of Christmas stories and pictures and Christmas cheer. It will delight the women folks and children. It tells how to make dozens of things for Christmas. It has a page of puzzles. Besides it has many pages of farm news and notes, including a big article on the marketing of farm crops, and the Farmers' Lobby. Remember the Christmas number of December 10th will be sent only to paid-in-advance subscribers to FARM AND FIRESIDE and that these big Christmas offers expire December 20th. Send your subscriptions before December 20th.

A Christmas Announcement Card

If you accept our offer No. 3 and give a year's subscription to FARM AND FIRESIDE to each of two friends, we will send to each friend on Christmas Day a handsome announcement card stating that FARM AND FIRESIDE will be sent for a full year, 24 numbers, and that the gift is from you. The announcement card is a handsome, heavy card, printed in many colors.

Write your order on the blank on Page 17 or on a blank piece of paper—before December 20th.

FARM AND FIRESIDE
Springfield, Ohio

Poor Relations

[CONTINUED FROM PAGE 21]

"Allow me to congratulate you," Marion murmured, her heart beating strangely loud.

"Thank you," the girl replied. "I know you will respect my secret, and you see—" she smiled sarcastically, "that between my social duties and Mr. Hastings I have little time for chums."

Mrs. Martin, half embarrassed at her daughter's lack of consideration, half rose as if to leave.

"Oh, don't go, Aunt Clem," Marion protested instantly. "I have ordered tea."

The lady subsided uncomfortably, and for another half hour, while the tea was served, the desultory, unsatisfactory conversation left in the girls' minds no lingering doubts as to their aunt's chilly attitude, though she insisted on their dining with her most informally on Sunday.

Finally they left, and Marion and Penelope stood staring at each other.

"Oh, I'm cold," Marion shivered at last.

"Sis," Penelope whispered in response, "we'll have to fight our fight alone!"

"Yes, and I thought they would help us so." Her voice broke. "They didn't even ask us about our work."

For a long minute Marion did not move, then she turned, saying abruptly, "Pen, just think that—that block-of-ice-of-a-girl is going to marry Mr. Hastings. How can he care for her? I don't believe I will like him after all. He has such bad taste! I don't think I'll even present my letter to him."

"Nonsense," Penelope's voice was almost sharp with disappointment. "Be glad you have a definite opportunity in this selfish town. Look at the trouble I am having."

"Yes, an opportunity to be patronized and looked down on," Marion retorted mutinously. "I don't want a position out of condescension or pity. If I do go to see him, I won't tell him of my relationship to Penelope. Not a word. It will be strictly business." Her small red mouth set firmly, only to quiver traitorously the next moment. "Pen," she looked at her sister entreatingly, "let's work hard. Let's show them we are to be looked up to. They're not a bit better than we are. What if they have money, we have brains. Let's use them, Pen. They will come to us yet, but, oh, Pen dearest, I wish it was now, I wish it was now!"

Chapter V.

THE next afternoon Marion plunged into the down-town business section, resolved to make her application to the much-pictured Mr. Hastings. She reached his seventh-floor office, only to learn from an office-boy that he was "Out."

"I'll wait," she announced resolutely, and seated herself on a velvet bench.

However, an hour went by, every minute taking with it an atom of the girl's courage, and still he had not come. The waiting-room was so large; its mosaic floor and marble columns so chill and cold. Every time a tall, long-striding figure passed along the corridor a nervous thrill unsteadied her lips. Every one seemed so busy, dozens and dozens of hurrying men, and occasionally here and there a cheaply clad woman hurried constantly to and fro, intent and absorbed on their missions. She felt almost lost as she noticed the long, empty bench stretching on either side of her. What chance would she have, even if Mr. Hastings did come? Suddenly she felt herself unfit for an interview that day; besides, she had promised to meet Penelope at half-past four. Now the clock was clanging out the hour. She rose instantly. "I can't wait any longer," she told the boy, very pale and not smiling now. Then, turning swiftly, ran down the steps and out into the noise-filled street.

At twenty minutes past the hour she walked into the crowded hotel where she was to meet Penelope. She sat down and waited; a dull spot, in her sheenless black, against the bright blue of the furnishings. However, the gold of her hair and the hyacinth of her eyes were undimmed, and many an admiring glance rested momentarily on her sober, troubled face. Nothing is so disheartening as the sight of bustling prosperity, when the wherewithal to join the self-satisfied ranks is lacking. So to Marion, fresh from a fruitless attempt to start her New York career, besides having had one of her stories returned that morning and with Penelope expecting nothing from her day's efforts, the pageantry of New York opulence held forth no hopeful lure, only a mocking brilliancy, and her fingers tightened convulsively about her scantily filled purse as thoughts of their dawning struggle almost terrified her.

When Penelope finally arrived, she had grasped Marion's gloved fingers in a warm pressure before the girl was aware of her presence.

"Oh, Sis," she exulted, "I got the position! and I'm so happy! Isn't it glorious? That dear old gentleman was so kind. I'll shower golden blessings on his head. You see if I don't." Penelope's face was glowing.

"Sis," she cried softly. "Oh, you darling. Do you think they would put me out if I hugged and kissed you?"

"Better not try," Pen laughed for sheer light-heartedness! "Marion, I'm to get twenty dollars a week. Isn't that liberal? Isn't it splendid?" She turned her glowing face away for a moment, her eyes unconsciously resting on the thronged tea-room.

"Marion," she suggested, "let us celebrate. Be my guest for tea. Come on. I'm in a gloriously reckless mood."

"Oh, thank you, Miss Martin," her sister replied in her best manner, with a sudden rush of high spirits after her depression. "I shall be delighted." Then she added wickedly, "Food and drink have become very alluring words since I came to this city."

In a moment they were ensconced at one of the tiny tables. Penelope was ordering tea and cakes with ill-concealed pleasure.

"Pen," she caroled softly. "We're taking tea at one of New York's most fashionable hotels! Think of it! How we used to dream of such a thing way out in St. Paul. Oh, Pen, I love the city, now that it's beginning to adopt us. Pen, if I could get on a newspaper and if my stories would be accepted and if we had a few friends," she emphasized each "and" gleefully, "I—I wouldn't change New York for Paradise!"

"You little enthusiast," her sister smiled. "But what about your interview with Mr. Hastings and the story?"

"I didn't have any interview. He was out, and as for my story, well, 'the cat came back.' I was ready to weep with discouragement." She sipped her tea slowly as she ruminated. "How I do detest those long envelopes. When I get rich and famous, I'll never have one. I'll send my manuscripts by special messenger and, of course, never get them back. Funny, those old envelopes positively spoil my sweet disposition, and happy the day when I say good-by to them forever."

"Should auld acquaintance be forgot?" Penelope quoted with her quiet humor.

"Acquaintances!" Marion paused. "The miserable things have stuck closer than brothers." She laughed softly. "When do you start in at Pierce's, Pen?"

"On Monday. I am to go to a Mr. Shreves at New Rochelle, for a trial. He is a widower who wants to have his house refurnished."

The girls talked happily for perhaps half an hour, when suddenly Marion clutched Penelope's arm. "Pay the check quickly and come," she commanded.

"Why? What is the matter?"

"Aunt Clem and Cousin Penelope have just come in with Mr. Hastings. I recognized him from the picture. Hurry! They must not see us."

In a moment the two walked swiftly out of the room, Penelope wondering at her sister's unwonted temper.

"Did you see—him?" Marion questioned.

"Yes. Isn't he a handsome man? Penelope ought to be very happy."

Abruptly the other girl frowned for no apparent reason, and not another word on the subject was said between them.

[TO BE CONTINUED]

Inexpensive Christmas Gifts

[CONTINUED FROM PAGE 24]

of previous round; join with slip stitch.

Fifth Round—Chain three; two double crochets over every double crochet of previous round; join.

Sixth and Seventh Rounds—Same as fifth.

Try to keep the top and brim of hat perfectly flat. The increase and decrease of double crochets must be gaged accordingly.

The back of the little needle-book is simply a flat circle of double crochets. Start the same as for the hat with first, second and third rounds as already given. Then add three more rounds, keeping the circle perfectly flat by judicious widening.

The Handkerchief-Case is not only attractive, but practical.

Materials: One half yard of ribbon four inches wide, one yard of ribbon one inch wide, twelve inches of elastic one half inch wide, a tiny piece of sheet cotton, sachet.

Cut two pieces of cardboard a scant four inches square; cover each section with a piece of sheet cotton; then with ribbon, whipping the side edges neatly and blind-stitching the joining on the one side of each piece. Halve the narrow ribbon; place the two sections together and finely run one eighth of an inch in from the two edges. In this casing insert the elastic; fasten both elastic and casing neatly and invisibly. Attach this shirred band at the outside center of both top and bottom of the case.

The Iron-Holder shown is unique because of the little finger pocket at the right, to protect the fingers from the heat of the iron. Almost any heavy material can be used for the cover and bound with tape or a bias band; while asbestos and padding of canton flannel make an excellent filling. The side pocket is simply an extra piece the shape of the holder folded in two and placed upon the right half of one side of holder and bound in with the tape or bias banding.

Garters for Babies—These little ribbon accessories are very attractive.

Materials required: Three eighths of a yard of soft white hat elastic one eighth of an inch wide; one and three quarter yards of satin ribbon one quarter of an inch wide; one and one quarter yards of lace one quarter of an inch wide.

If the garters are to be embroidered, the work must be done at the first. A small spray of tiny flowers—blue forget-me-nots or pink arbutus with green leaves—worked with narrow ribbon or embroidery silk is very lovely. The embroidery should not extend over more than two inches of the ribbon and should be placed on two sections.

Cut four lengths of ribbon, each eleven inches long. Cut the lace into four equal parts.

Place an embroidered piece of ribbon and a plain piece (wrong sides) together; place a piece of lace along the edge of the ribbon; overhand all three together. Finish other side of ribbon similarly with lace. This finishes a casing for one garter. Insert elastic through the casing; fasten elastic together at the ends; then join casing invisibly.

THE HOUSEHOLD

Helpful Hints—To prevent the juice of pies running out, make a small cornucopia of writing-paper and insert the small end in a hole in the middle of the top crust.

To remove palm scales, wash the plant in water to which a few drops of oil of cedar have been added. If the scales do not disappear with the first washing, repeat in a week.

Rub your nickel tea-kettle and tea and coffee pots with a soft cloth dipped in kerosene and see what a beautiful polish it will give. MRS. F. S.

To keep the leaves of your rubber-plant green and glossy, sponge them once a week with a cloth wet in sweet milk instead of soap and water. It makes them much glossier.

In washing écru lace curtains, add one teaspoonful of yellow ocher to every quart of the rinsing water, and when dry the curtains will look like new.

Washing Dainty Flannels—In washing baby's dainty flannels, do not rub the soap directly on the garment, but shave the soap and boil it in water until a thick lather is made, then pour it into the wash water. Do not rub the flannels on a wash-board, but press gently in the hands and rinse in clear water of the same temperature as the wash suds. Add one tablespoonful of ammonia to one gallon of the last water.

Bran for Baby's Bath—Make a bran-bag for the baby's bath. Use soft cloth with meshes coarse enough to allow the water to filter through, and fill with one half cupful of bran, one teaspoonful of finely shaved pure Castile soap and one ounce of powdered orris root. Moisten with water and use as you would soap. A bag may be used several times. If you want to make a present for a baby, half a dozen bran-bags will be very acceptable. A narrow band may be crocheted around the edge.

Squash-Butter—Stew the squash down until quite dry, rub through a sieve, add sugar to sweeten to taste, flavor with cinnamon or any preferred flavoring and add a little sweet cream.

Canning Sausage for Summer Use—It may not be generally known that sausage may be canned in glass sealing jars and kept all through the summer as fresh as when newly made. We put away our surplus sausage in this way and we have had it in August and it could not be told from fresh sausage. This work, coming at a time when other work is not pressing, can very easily be done and a supply of fresh sausage ready to use at a moment's notice is very handy to have during the summer months.

To prepare the sausage for ten pounds of meat, cut in thin slices and spread out on a table, sprinkle over five tablespoonfuls of salt, two of black pepper and sage to flavor to taste. If the sausage is to be canned, less sage should be used as the flavor seems to grow stronger with the canning process. Now grind the mixture, but not too finely, put it into a large vessel, place it on the range and add about a teacupful of water to ten pounds of meat and stir and mix thoroughly. After the sausage is well mixed we always try it by frying a roll, to see if the flavor is all right, as more may be added as the sausage is being mixed. When well mixed let cool, then make into small rolls that will just go into a two-quart glass can. The rolls will shrink a little when frying. Fry the sausage slowly until it is well cooked. It is a good plan to place the rolls in a dripping-pan and fry in a hot oven, but care should be taken to make the rolls compact, so that they do not come apart when frying.

When the sausage is thoroughly cooked place the glass can in a handle dipper on a folded wet cloth and turn a few tablespoonfuls of the hot drippings into it, then with a long-handled fork lift the rolls and place them in the can, adding hot drippings and packing the sausage as solidly as possible until the can is full; then press down; add more fat, so that there will be no air spaces between the rolls and seal with the fat running over the top of the can. Canned in this way sausage will keep indefinitely.

ELIZABETH CLARKE HARDY.

To Cure Hams—Trim the hams and let become thoroughly cold. Make a pickle for each one hundred pounds of meat as follows: To six gallons of water add two pounds of brown sugar, two ounces of saltpeter and one ounce of cayenne pepper. Mix all but the pepper and heat to the boiling-point. Skim well while boiling. When cool add the pepper and stir well. Pack the hams in a stone or wooden vessel, pour over them the cold mixture and let the meat remain in the pickle four weeks. Take the meat from the pickle and let drain until nearly dry, sprinkle lightly with powdered borax and smoke to suit the taste. As soon as the hams are smoked place them in paper sacks tied closely at the top, allowing the string to come out to hang up the ham, then hang them away in a cool, dark place, where it is not too damp, and they will keep all summer.

How to Dry Beef—For twenty pounds of beef cut in convenient shape use one pint of salt, one teaspoonful of saltpeter and one fourth pound of brown sugar. Mix well and divide into three parts and rub the pieces thoroughly with the mixture for three successive days. Let it lie in the liquor it makes for six days and then dry. The best way to dry beef is to place the pieces on earthen platters and set in a moderately warm place, turning the beef every day. It should not become too dry or it will be tasteless, and when it is ready to put away it can be kept in paper sacks in a cool place.

To Drive Away Ants—Buy five cents' worth of tartar emetic and divide it into three saucers, mixed with sugar, and place where the ants are troublesome. This will eradicate them. While this is not a deadly poison, still it is wise to keep it away from small children.

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Write a postal for our book today—shows over 400 styles and sizes, more than any ten stores can show you in stock—and you save $5 to $40 cash. No better stoves or ranges than the Kalamazoo could be made—at any price. Prove it before we keep your money. Be an independent buyer. Send name for Free Catalogue No. 183.

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This is the Old Dutch Oven brought back to life, and restored in our Perfect Imperial. Direct from factory to you at Wholesale Price.
Easy credit terms if wanted. Freight prepaid. 365 Days' Guarantee.
Write to-day for Free Catalog and Special Prices.

THE IMPERIAL STEEL RANGE CO. 368 State St., Cleveland, O.

CLOSING DAYS OF A GREAT PIANO OFFER

January first this year we perfected certain plans for a twelve months' campaign.

These plans involved the placing of at least one Schmoller & Mueller Piano in each new community in the United States.

Up to that time many neighborhoods—many communities—knew about this Sweet Toned Piano.

But where there was one such community—we realized there were doubtless a hundred which knew nothing of the merits of this superior instrument.

Of this piano—which had satisfied music lovers in all walks of life—the humble cottager and family—

As well as those who enjoy more largely of this world's goods.

Thus our problem for this year of grace, **1910**—was to make better known the superior qualities of the Schmoller & Mueller Piano.

To bring about its successful introduction into new neighborhoods—new communities everywhere.

We realized at the outset that the task was a large one—one which only a well-organized business institution could successfully bring to a happy conclusion.

Our estimated output for the year was 5,000 Schmoller & Mueller Pianos. Five thousand homes must be found into which we could place a

Schmoller & Mueller Sweet Toned Piano

Five thousand neighborhoods and communities to find—five thousand sales to be made. Had we other than a high grade—a sweet toned—a well-built—a fully guaranteed piano to offer—the task we set ourselves to thus accomplish would have been insurmountable.

But with a piano like the Sweet and Mellow Toned Schmoller & Mueller—with years' record back of it—giving the greatest of pleasure in the homes of thousands of satisfied music lovers—and with a well-organized company to handle the business—this problem was lessened to the question embodying the plan of selling.

We evolved a selling plan which has been most enthusiastically received.

A plan when explained is easily understood by every intending buyer.

Briefly, here is our plan.

To give the first buyer in each new community or neighborhood this year a Close Wholesale First Buyer's Price.

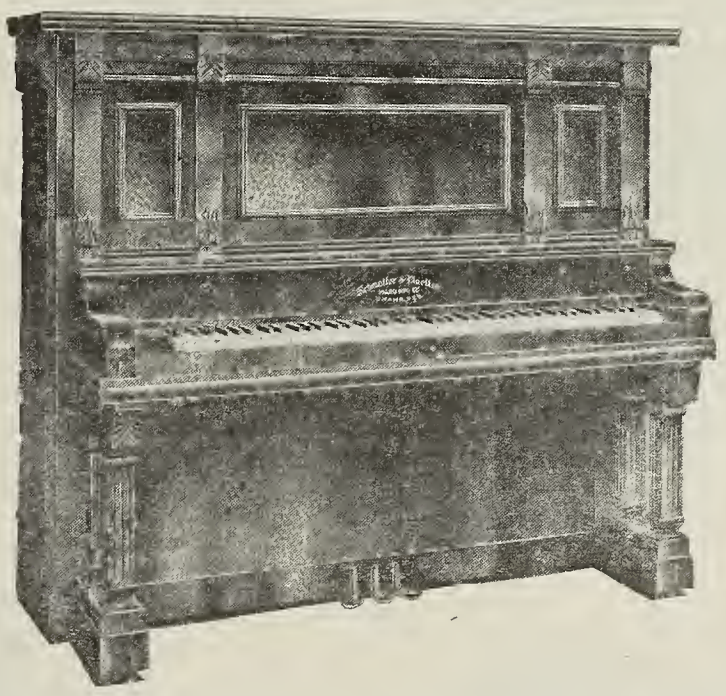
A Schmoller & Mueller Piano in each community and neighborhood is the best advertisement we desire for our Piano.

One Schmoller & Mueller Piano sold in a new neighborhood has time and again brought about the sale of 3, 4, 5, 6 and more Schmoller & Mueller Pianos—within a short time thereafter.

Giving the First Buyer a Close First Buyer's Price would work to the more surer and quickly accomplished desired end—the placing of 5,000 Schmoller & Mueller Pianos in that many new communities.

To date the result has been gratifying.

Faster and faster orders have come to us this year.



New communities have been quickly supplied.

Prospective buyers have seen the manifold advantages of our plan and coupled with that the high and guaranteed quality of the Piano offered—they have not held back in accepting our proposition.

This year is rapidly passing. Soon the twelve months have gone. Soon our plans made the first of the year will have been perfected.

Soon the 5,000 Schmoller & Mueller Pianos set aside for that many new communities and neighborhoods will have been sold.

Perhaps your community has not as yet welcomed into its midst the First Schmoller & Mueller Piano—

If so—the opportunity is yet before you to buy the best Piano at a price never before heard of as being made on a fully guaranteed instrument.

The least you can do—interested music lover—is to hasten back to us the coupon inquiring for Catalogue and Full Details concerning the First Buyer Introductory Offer.

It is a simple matter to fill that coupon and mail it today.

Remember, we positively guarantee the Schmoller & Mueller Piano for 25 years—we back this up with our entire Capital Stock and Surplus of Half a Million Dollars.

We save you the most money on the Schmoller & Mueller Piano you buy under our present offer and under our plan of payments.

Placing within the reach of all intending piano buyers this Schmoller & Mueller Piano—

No home need longer be deprived of the harmonizing, the educational influences of music.

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Send the coupon to us today—don't permit some other music lover in your community to be the First Buyer of a Schmoller & Mueller Piano.

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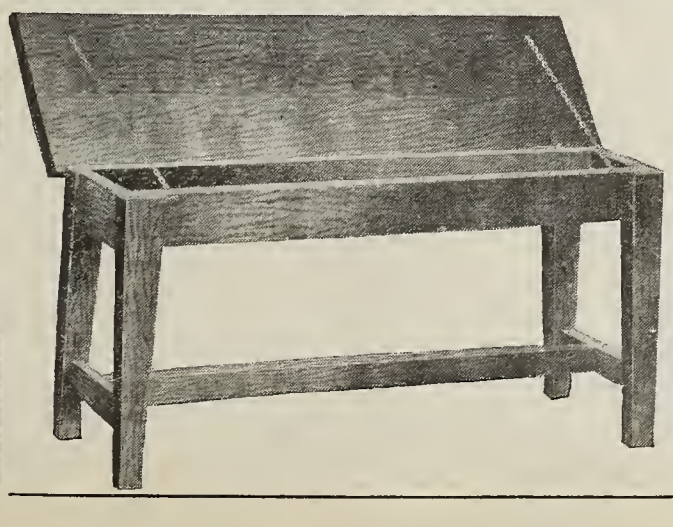

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Why Be Discouraged?

By John E. Bradley, LL. D.

Ex-President of Illinois College

No life is exempt from disappointment. It is the common lot. Let us bear our share of it bravely. "Discipline is good for the soul" and like the wind which strengthens the oak and drives its roots deeper, so trials and troubles often help us to lay hold upon unseen sources of strength and lift the thoughts into an atmospherc of peace and light.

Thus it is related of Florence Nightingale that it was during a period of bitter disappointment that she resolved to break with tradition and prejudice and take the step which ultimatcly led her to the infected camp of the soldier and enshrined her in the popular heart.

Unnecessary Disappointments

But has it ever occurred to you much of the disappointment which fills the world is unnecessary? How many people groan over failures and losses which need not have occurred? Many complain of hard luck who have only themselves to blame. Even superior persons, excellent men and women, often lose, for no good reason, the success which might have been theirs. Thus the late Marion Crawford published forty-nine volumes—a splendid record of literary industry—but he is said to have left a still larger number of works unfinished; and it is related of an English philosopher of real talent that he began four thousand essays and never completed one of them.

Perhaps a literary genius should not be judged by ordinary standards. Something must be conceded to personality. But it still is true that it is only finished work that counts. The abandoned enterprise, the effort which stops short, even the partial success, brings disappointment. And not only history, but common observation and experience are filled with the rccords of such disappointments. How can we avoid them?

Hasty Decisions

Use reasonable foresight. Do not start prematurely, nor enter into foolish schemes and projects. The wrecks upon the seas of speculation and high finance, the dead-beat and tramp lying stranded along the shore are alike warnings against hasty and ill-timed ventures. The wise man counts the cost before he begins to build. He does not invite disappointment by entering upon unwise plans or building upon unsafe foundations. He does not make important decisions or start on new enterprises without adequate knowledge or reflection.

Don't Lose Interest

But the larger share of disappointments spring from discouragement. People fail most frequently, not because of some fatal mistake, not because they did not grasp a golden opportunity, but simply because they stop prematurely.

It is not easy to persevere. We are all "but children of a larger growth" and, like children, we are apt to lose our interest when the novelty wears off. Work and plans which seem full of promise at first lose their attractions as we become more familiar with them. "Distance lends enchantment;" opportunities to which we looked forward with enthusiasm grow tame and dull after we have stood face to face with them for a while. How many a boy, yes, how many a man, is tempted to quit when the work settles into a routine or becomes monotonous. How many a bitter disappointment has come from the lack of patience and will-power to stick to one's job till it is done.

President Garfield once said that the finest of the fine arts is the art of weaving gladness and beauty into one's daily tasks. Sometimes these tasks are humble and monotonous. They seem like drudgery, but they are really links in a golden chain which bind a noble spirit to a worthy deed.

A worthless weed springs up in a day, but it takes a long time to grow a century plant or an oak. The best things in life usually come slowly, the reward of patience and earnest effort.

We do not always realize how near we are to the goal. Many falter and cease effort when it is almost in sight. Robert Bruce had becn defeated by the English six times and a reward was offered for his head. He was in despair. As he lay in bed one morning in the little hut in which he had found shelter, he saw a spider vainly endeavoring to throw its web across from beam to beam. Again and again it failed, but with the seventh trial it succeeded. Bruce took heart! "I can do as well as a spider," he said. He rallied his followers and was soon established on the Scottish throne.

Napoleon led an army of twenty thousand soldiers across the Alps. As he descended into the plains of Italy he encountered, at the village of Marengo, an army of thirty thousand. All day the conflict raged. As night drew on, Desaix, one of his chief marshals, came to him, saying: "Sire, the battle is lost." "Yes," replied Napoleon, "but it is only three o'clock. There is time to win another." A new charge was ordered and the sun set upon Napoleon's most famous victory.

Victories in Every-Day Life

And one need not be a Bruce or a Napoleon to achieve just as great victories. They may be won, they *are* won, by plain people in every-day life. The man who resolves, when discouragement threatens, to make one more brave effort, the woman who says, "I'll be true to my task, however trying it may be," win victories that are greater than Napoleon's. And they are not few. Thank God, there are many who say, when times seem hard, "I'll stick to it till I win" or "I'll fight it out on this line" or "If I can not do it in one way, I will in another."

We are Saved by Hope

We can all have strong wills if we will only think so. "We are saved by hope." Be thankful if you have a sunny, hopeful disposition; but if you have not, you can cultivate one. Look on the bright side; magnify the things which are pleasant and encouraging. Do not magnify your annoyances and hardships; remember that they come to most people. Find something to be glad about; let that give you faith that you will find greater things.

Our field of effort may be humble. No one may note our success or failure. But it can never be unimportant to us. The farm work, the household task worthily done, express character—high unselfish purpose. Disliked and neglected, they bring disappointment; faithfully performed, they bring not only good crops and a happy home, but also a higher manhood and womanhood.

And we are not only saved by hope ourselves, but we save others by our hopefulness—by our perpetual optimism. The world loves the man or the woman who is in the cheering-up business. In the family life, in the social circle, they bring help and strength. What achievement of Napoleon's is worthy to be compared with Florence Nightingale's magnetic influence as her cheering words revived the drooping life of the wounded soldier and gave inspiration and strength to her nurses!

So, fellow-toiler, resist discouragement. Walk in the clear sunlight of divine promise. "No good thing will He withhold from them that walk uprightly." He is interested to see His children accomplish every worthy purpose.

The Art of Giving

[CONTINUED FROM PAGE 23]

us. Oh, that it should come to this," she thought. "For weeks," she told me afterward, "I could not force myself to face the members of my church. If one of them had come to me alone, without letting others know of it, and had offered me a turkey in a friendly neighborly way, I should undoubtedly have received it gratefully, for we were very needy. But the sting was in the publicity of the act."

Often partly worn clothes may be handed over to some relative or friend who needs help.

Putting yourself in the recipient's place will do much toward knowing how to offer such things. And when you have been successful in giving graciously and without offense, and the recipient undertakes to express his thanks, it is well to waive aside the thanks and ask them gently, just to pass along the kindness when the opportunity may come their way.

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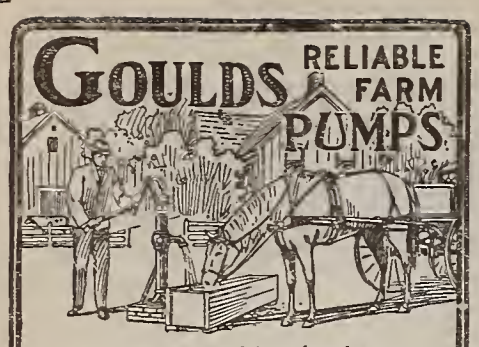
Writing to Santa Claus



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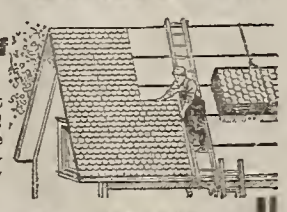

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With the Editor

THE Christmas word is and ever will be, "Merry Christmas!" We say it to each other on the morning of the festival whether we are making any preparations for merrymaking or not. Often we meet glumly and say "Merry Christmas!" with a face and a heart that belong more properly to a funeral or a hanging.

Shall we then abandon the salutation?

By no means. Many a gloomy Christmas has had its ice broken and its frost thawed by the mere perfunctory utterance of "Merry Christmas."

Say the cheerful thing, and the cheerful look will struggle to make good on your face. Let the cheerful look pull the draw-strings of your mouth, and the cheerful feeling will begin to warm you up inside with a sort of spontaneous combustion. All the phenomena of a happy day may be started by the perfunctory "Merry Christmas" of the first meeting of the morning.

In another column Mr. Ross describes the kindly merriment of an old-fashioned Christmas on an English farm. We can not hope, and we should not desire, to reproduce those conditions here. The little kingdom of the farm is in America a little republic. Over there they sat down according to which was "above" the other; here, one of us is as good as another, and often a blamed sight better. But good fellowship surely is as possible with us as with the British farm community.

Oh, of course, I understand that most of us will go to church in the morning, or the evening before, and that the Christmas tree, either at the church or the schoolhouse or at home, will make things riotously merry for the kids: but what I'm trying to suggest is that thousands of American farm families have lost the power of merriment—if we ever had it. Not that we are unhappy; but we aren't as happy as we might be. The German frolics of our fathers, if we are of German descent; the holiday fun of whatever European nation we happen to be descended from; the feasts of our Irish forebears; the homely ceremonies of our English ancestors, have mostly been in some way wiped out of our farm life.

IT SEEMS to me that pioneers are always sad. I know the American pioneer was and is. The forest and the prairie are great and beautiful and glorious, and we would give almost anything to see them again as they once were—but they were not merry nor cheerful. People laugh and sing as they bring in the grapes in the vintage, as they husk the corn in husking-bees, and as they sit a hundred strong at the Christmas feast of those who have worked together in the summer—but these are carnivals of the old-settled country. They are not merry who cut the forest or navigate the prairie and see before them the overpowering problems of planting townships and raising states. It is a serious and oppressive business.

And we are oppressed, too, with the problems of our national life. There's a lot in this matter of working out justice in a great democracy that's not as funny as the foreigner may think. It isn't all beer and skittles. It's downright hard, gruelling, serious work. We Americans have had on our hands the greatest problems of time; and they have got on our nerves. We are not an unhappy race, but we have largely lost the gift and power of forgetfulness and light-heartedness.

We can't be little children any more, as we used to be in Ireland, in Norway, in Sweden, in Germany, in France, in Italy. That's what's the matter with us—we have lost the power of becoming little children, and laughing, dancing, frolicking, playing—forgetting.

Pioneering, governing, criticising things, eternal vigilance which is the price of liberty, always carrying the future in our hearts, and the sorrows of the world in our faces—these are the things that play the deuce with Christmas festivities and farm jollifications.

Well, then, away with them for the day. Let's try having fun for once. Unbend! For the love of the genial Spirit of Christmas, unbend—if it cracks a vertebra! If you can't say anything better, shout to all and sundry: "Cheer up! The worst is yet to come!"

As a matter of fact, this is a good time to start in on the custom of being even as little children one day in the year. Unless we do, there is one Kingdom of Heaven into which we can in nowise enter—and that is the Kingdom of Merry Christmas.

Is the result of last season's work such as to leave the problem of a competence for old age as far from solution as ever? Well, have you noticed any old people about your neighborhood suffering during the year? And in any case, why suffer in spirit all your life for fear of bad fortune to come? Probably it won't come. And if it does, meeting when it comes, and not before, and doing it cheerfully takes from it half its awfulness. He only is licked who gives up.

DO THE middlemen and transportation companies and combines take all the profits and leave you with a mere living? Well, so the rich and powerful did for those jolly ancestors of ours who were glad to be alive. Try it once, just being glad you're alive. It's worth being glad for.

Are things bad with the nation? Why, beloved, they are never bad when any large number of people know they are bad. Things are never bad when we are trying to cure them. Things are never bad when there's a remedy in sight.

Is the mortgage still unpaid and about to fall due? Well, cheer up! It's not half as difficult for a farmer to pay a mortgage of a thousand dollars now as it was thirty years ago. There never was a time in American history when the farmer had as near an even break with the money-loaner as now. And every year that the miners dig gold from the earth to dilute the standard of value, it grows easier. Our schools are not as good as they should be, but we are coming to know what's the matter. Land is high for the fellow who hasn't any; but it is still possible for him to get it. All things considered this is the best day the world ever saw; and emphatically it is the best day the American farmer ever saw. We shall have our ups and downs, but the tide of progress that ebbs and flows, gains yearly on the shore.

So, Merry Christmas! Whatever is wrong that can be remedied, we'll remedy, and not mourn over it. Whatever is amiss that can't be remedied, we'll take bravely, and not whine over it. All stumps and stones and roots and stumbling-blocks come under one or the other head—so here's to the man, the woman, the family, the neighborhood, that says begone dull care, and "Merry Christmas!" The festival has too long been one for the babies, brooded over by brows of care. Let's all be kids this once.

Remember Tiny Tim and his "God Bless Us Every One!"

Herbert Quick

Index to Advertisements

Agents Wanted
Allen Manufacturing Company 24
Syphers, L. L. 13

Birds
Cugley & Mullen 23

Bane-Cutters
Mann, F. W. 13

Clathing, Glaves, Baats, Shaes, Underwear
Cravenette Company 23
High Rock Knitting Company 15
Skinner's Satin 21

Carrespondence Schaals
Beery, Prof. Jesse 16
Bissell Colleges 15
Gray Realty Company 8
International Ry. Correspondence Institute 9
Mohler System of Colleges 15
Northwestern School of Taxidermy 15
Official Railway School 16
Learn to Write Advertisements 29
Page Davis Company, Be an Illustrator 28

Embraidery Navelties
Kaumagraph Company 29

Fanning Mills
Campbell, Manson Company 9

Farm Engines
Detroit Engine Works 2
Detroit Motor Car Supply Company 13
Monarch Machinery Company 9

Farm Taals
Foote Manufacturing Company 2
Pray, Wm. H. 14

Fences and Fencing Materials
American Steel and Wire Company 11
Brown Fence and Wire Company 13
Coiled Spring Fence Company 9
Kitselman Brothers 9
Kokomo Fence Machine Company 24
Ward Fence Company 24

Fertilizers
German Kali Works 7-8

Firearms
Marlin Firearms Company 14

Faad-Stuffs
Baker & Company, Walter 31
National Biscuit Company 29
Postum Cereal Company 9-24-29

Fur and Hide Buyers
Corry Hide and Fur Company 14
Crosby Frisian Fur Company 15
Funsten Brothers 14
Jewett & Sons, M. J. 15
Taylor & Company, F. C. 15

Grinders and Feed Mills
Crown Point Manufacturing Company 11
Straub & Company, A. W. 12

Hay Presses
Spencer, J. A. 9

Hausehald
Allen Manufacturing Company 24
Ayers, Anna 23
Braham Company 9
Collette Manufacturing Company 24
Linen Thread Company 23
Montgomery Ward & Company 31
Parker's Hair Balsam 24

Land
Nashville, Chattanooga and St. Louis Railway 2
Southern Railway 2
Strout, E. A. 9-15

Lights, Burners, Etc.
Best Light Company 24
Mantle Lamp Company 24

Live Stack, Stack Faads and Remedies
Barwell, J. W. 11
Fairfield Manufacturing Company 10
Great Western Cereal Company 12
Hess & Clark 13
Mineral Heave Remedy Company 10
Moore, Albert 12
Newton Remedy Company 10
Ohio Marble Company 13
Wilbur Stock Food Company 32
Young, Dr. P. D. F. 10

Patent Attarneys
Coleman, Watson E. 23
Evans, Victor J. 23
Farnham & Sues 28
Lacey, R. S. & A. B. 28

Periadicals, Baoks and Post-Cards
Atkinson, Wilmer Company 15
Hanson's Magazine Agency 24
Harding Publishing Company 14
Review of Reviews 25
Rossiter, Will 24

Pianas, Organs and Musical Instruments
Cornish Company 24
Wurlitzer, Rudolph 23

Paultry and Incubatars
Belle City Incubator Company 13
Des Moines Incubator Company 13
Foy, Frank 13
Miller, J. W. 13

Pumps and Windmills
Goulds Manufacturing Company 2

Raafing
Edwards Manufacturing Company 2
Montgomery Ward & Company 8

Sawing Mill and Machinery
American Saw Mill Machinery 8
Folding Sawing Machine Company 9

Seeding Machines
American Seeding Machine Company 9

Seeds, Plants, Etc.
Gardner Nurseries 8

Separatars
American Separator Company 12
Sharples Separator Company 11

Spraying Machines
Champion Manufacturing Company 9

Staves, Ranges, Heaters, Etc.
Kalamazoo Stove Company 29
Rochester Radiator Company 28

Stump-Pullers
Hercules Manufacturing Company 9

Wagan Wheels
Electric Wheel Company 10

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The Illustrated Farm and Family Journal

24 NUMBERS
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FARM AND FIRESIDE

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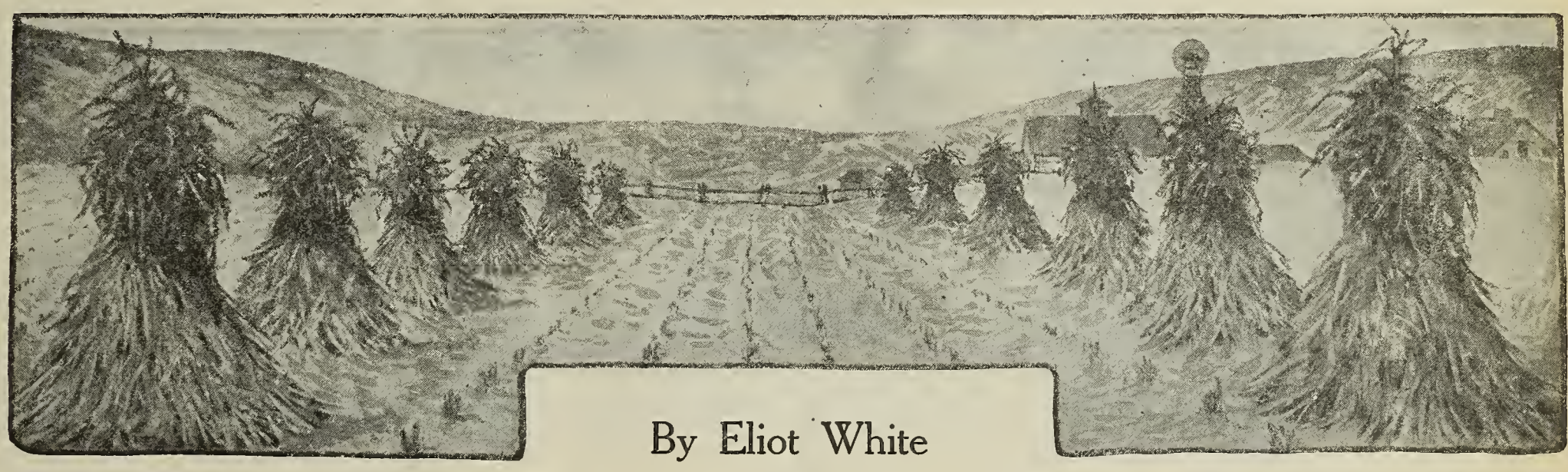
As I Looked Through the Corn-Shocks

A Christmas Vision



By Eliot White

As I saw the tent-like shocks of corn still standing in a field, though the snow of December had caught between their dry brown stalks and leaves, and had drifted about their feet like crystal foam, it seemed that I could look between their rows down an immense vista, to fields of long ago.

I saw first a hillside of Judea under the glittering stars of a calm winter night, where sheep that had browsed through the day on the sparse grass lay huddled together for warmth, and their keepers were gathered close to a fire that now sank to crimson embers, now leaped into a crackling blaze again, as one of the shepherds flung a dry bough on the glowing pile.

To these humble guardians of their flocks there befell a wonderful adventure. Though many are the doubters who have denied or even scoffed at the shepherds' tale, yet, on their simple word alone, twenty centuries afterward multitudes accept their testimony that suddenly a great company of shining celestial beings peopled the dark vault of the oriental night, above the fields and flocks, telling the shepherds to seek for a Savior just born and laid in the manger of a neighboring stable. Then, singing in wonderful chorus before they vanished again into the star-gemmed heavens, the angels left this salutation to ring with gladness in human hearts to the end of the ages, "Peace on earth, good-will toward men!"

Such were the first hearers of the Christmas message—not sleepers in palaces nor midnight revelers in crowded cities, but hardy watchmen out in frosty meadows. Perhaps just such shocks of corn as I saw in the New England field so long afterward, rustled dry leaves above the sleeping flocks.

As I looked again between the rows of tented sheaves, down the vista of the past, I caught a glimpse of a corn-field of Galilee in harvest-time, stirred by the breeze till it became like a little lake of buff and green waters under the noonday sun. The "corn" of the old world, this—perhaps it was what we to-day would know as wheat. And as though fording its rippling border, I saw the heads and shoulders of a band of peasants, of whom the foremost was of nobler aspect than the others, who followed Him as men in dreams try to keep a beautiful vision from fading into the common day.

Then as the full ears that grew all about the passers through the corn-field lightly touched the toil-worn hands, the men began to pluck and eat from them, as though freshly awakened to physical hunger. And while envious Pharisees rebuked the Leader for allowing His disciples to gather the food "upon the Sabbath," He defended them, declaring that if their detractors "had known what this meaneth, I desire mercy and not sacrifice," they would not have "condemned the guiltless." So again the hearers of the Christmas message were not the representatives of official religion, but a little group of fishermen and other toilers, whom the punctilious lords of orthodoxy despised. And to the salutation, "Peace on earth, good-will toward men," is added the good news that the divine longing is for mercy from human hearts more than for the costliest outward sacrifice.

As I looked once more into the vista that extended beyond the ranks of corn-shocks in the wintry field, I saw the sad, but resolute, bands of New England's Pilgrim forefathers smoothing level with the iron ground the graves of those who had succumbed to hardship, that the Indian enemies might not count how many of the "palefaces" had become yet paler from the touch of death. And as I saw the sparse plumes and timid leaves of the pioneers' first crop of corn in the new land, these appeared like brave flags on the ramparts of a besieged fortress, signaling to the lurking human enemies and all the harshness of the elements that there could be no surrender of the captured entrance to the new world, that must be stubbornly held until it should welcome vast citizen armies marching through it to conquest of the future's sisterhood of noble states—westward, ever westward, across a new continent.

And now what are these soldiers' huts, built between forest and meager corn-field, with half-frozen pickets in the very odds and ends of "uniforms" pacing through the snow before them? The scene has changed to Revolutionary times, and the bitter cold of Valley Forge renders the Continentals' Christmas a savage wrestle for very life itself, instead of the joyful festival in the brightness and warmth of the Yule log that in other years had cheered their new-world homes. Yet again perhaps the angelic song of "Peace on earth" was clearlier heard in the soldiers' bivouac in these snowy fields than ever in sheltered halls where men forget their vigil and sleep while the celestial anthem falls on unhearing ears.

But once more my view between December's snow-encircled tents of corn showed the forms of soldiers, now, alas! where some in blue and some in gray uniforms lay dead or mortally wounded in the fearful cyclone-path of battle. "Up from the valleys rich with corn" the poet saw the legions come, but here the snow is crimsoned with the blood of brethren, beside the corn's withered sheaves and where the shorn stubble is a symbol of a thousand bereaved homes, whence youthful lives were severed by the red scythe of war. Yet among these, too, were hearers of the Christmas message, when, ere their life ebbed, the wounded saw a flash of angelic wings and caught in heavenly strains the promise that peace should crown their sacrifice and good-will flow forth to all mankind from the nation that they died to keep intact. Is it any wonder then that as this latest Christmas-tide draws near it should find the field of corn-shocks in the drifted snow a sacred place, richer in memories of the past than even a cathedral's solemn aisles—fuller of promise that here the watcher may catch a glimpse of the celestial choir and hear their thrilling song, "Peace on earth, good-will toward men."

The California Coöperative Triumph

How Growers in the Golden State Sell Fruit—By G. C. Streeter

No study of the coöperative movement in the United States is at all complete without an account of the California Fruit-Growers' Exchange, probably the most successful effort in coöperative marketing so far achieved in America. For eighteen years it has successfully met and overcome every obstacle that could be placed in its way. No field of coöperation presents as many difficulties as those surrounding the California citrus-fruit industry, and this history is full of lessons to those who contemplate coöperative effort.

Oranges and lemons have been grown in California for more than one hundred years, but prior to 1880 largely for home consumption, so that the question of markets and marketing was of little importance. Thirty years ago the shipment of oranges was less than twenty car-loads per year. At that time citrus-fruit growing was usually a pastime, a fad or an experiment.

In 1874 the first Washington navel orange-tree was planted in California, and opened a new epoch in the citrus-fruit industry. The history of the California orange industry is the history of the Washington navel orange. For on that single variety was built up and established the reputation of Southern California for oranges. From the planting of that tree the industry has grown until the shipments now exceed thirty thousand car-loads annually. More than eleven million boxes of oranges are shipped every year, returning to the growers upward of twenty million dollars.

These orchards are thousands of miles from the bulk of their customers. They were at the mercy of a single line of railroad with rates almost prohibitive. In Eastern markets California oranges were unknown. The few buyers in the California market were in a combination to maintain the lowest prices. Many growers were obliged to ship on consignment to unscrupulous commission men who frequently not only absorbed the entire shipment, but drew on the grower for the freight. Speculators combined to keep down the price and destroy competition. The growers were at the mercy of both the buyer and the railroad, and profits were usually represented by a minus quantity.

The Turning-Point

The situation was undoubtedly at its worst about 1892, when orange-growing was done at a conservative loss. During 1893 many a crop of fine oranges was left to rot on the trees, because the grower could not sell them for enough to pay the cost of packing and shipping.

This disastrous condition marked the beginning of reform. A few small associations were formed to work for better packing and better shipping facilities. In some few cases they marketed their product on a mutual basis. Unfortunately these associations were too small and too inadequate to accomplish much and were short-lived. They did, however, one service; they pointed out the true solution of the problem. They demonstrated the possibilities of coöperation and established the fact that coöperative effort to be successful must, because of the conditions surrounding the citrus-fruit industry, be on a large scale.

On the fourth of April, 1893, a convention composed of orange-growers from all parts of Southern California assembled at the Chamber of Commerce in Los Angeles, their object being, to quote the language of their circular, "to provide for the marketing of all citrus fruit at the lowest possible cost, under uniform methods and in a manner to secure of each grower a certain marketing of his fruit and the full average price to be obtained in the market for the entire season."

This convention discussed at length the entire citrus-fruit industry and made certain recommendations to the growers of Southern California. Following the recommendations of the convention, the growers of each district were organized into an association and these associations had district exchanges. The exchanges established packing-houses, where the packing and grading of the fruit were done for the growers by the association at cost. The marketing was done through an executive committee composed of one member from each district. This arrangement continued for two years and effected a considerable improvement in the orange industry. It demonstrated the need of a larger and more compact organization and was succeeded by the Southern California Fruit Exchange, which began business October 21, 1895.

Since that the marketing of the fruit controlled by the various district exchanges and their associations has been in the hands of this organization and its successor, the California Fruit-Growers' Exchange, which was incorporated on March 27, 1905, and on September 1st. following, took over the entire business of the Southern California Fruit Exchange.

This present effective organization, the California Fruit-Growers' Exchange, is founded on the theory that every member is entitled to supply his pro rata of all fruit shipped through his association. And every association is entitled to its pro rata of the various markets throughout the country. This theory gives every grower his fair share of the market and the average price in those markets throughout the season.

Another theory of this exchange is that all fruit shall be marketed on the basis of actual cost. There is no profit for any one at the expense of any other member. It is all run on the true basis of coöperation, "Each for all and all for each." All books and accounts are open for free inspection by the members at any time.

The present system is exceedingly simple. The local association consists of the growers operating in any locality who prepare their fruit for market coöperatively. They establish their own packing-house for their own brands. They make the necessary rules and regulations for the pooling and grading of their fruit. Fruit of the different growers loses its identity when it enters the packing-house, and it is sorted, graded, packed and shipped as a common product. The only work of the members is to pick and deliver their fruit to the packing-house, where it is weighed and receipted for.

Much attention is given to the establishment of brands and the different associations are proud of the reputation that their brands enjoy in the markets of the country. They do everything possible to maintain and enhance the reputation of those brands, as they are important assets.

There are more than eighty of these associations covering the entire citrus-fruit district in California. The several in a locality unite and form a local exchange which deals with questions of local interest and serves to coördinate the association with the general exchange.

The general exchange consists of thirteen stockholders, all directors, and all selected by the local exchanges, each local exchange having its representative in the general exchange. These directors have full charge of the general exchanges, but are responsible to the local exchanges for results. This makes a purely democratic organization, as the selection of directors is ultimately controlled by the members of the local association.

The entire system is based on the coöperative idea. The organization is planned, dominated and controlled entirely by fruit-growers for the good of all the members. No individual or corporation reaps either dividend or advantage.

In its efforts to secure just and adequate returns for the fruit shipped, the California Fruit-Growers' Exchange was confronted with many difficulties. They found it necessary to free themselves from the speculative fruit-buyer and the dishonest commission man. To do this they were forced to take control of their own product in the markets. For this purpose the exchange established a system of exclusive agencies in all the principal orange markets in the country, employing a force of capable, energetic men of experience in the fruit business to manage these agencies. Most of these representatives are employed on salaries and devote their time exclusively to the interests of the association. No agent is allowed to handle any citrus fruit except those belonging to the association, although in some places where business is not heavy enough to occupy all of the agent's time, he is allowed to handle other non-competing products. The agents keep in close touch with the market conditions throughout their entire territory.

Feeling the Pulse of the Market

The exchange employs two traveling agents to supervise these marketing agencies. It is the duty of these representatives to study conditions, advise with the local managers, check up their accounts and have general supervision of affairs in their territory. They always keep the local agents advised as to the trend of prices in adjacent markets and coördinate and integrate the work of the different agencies, the policy of the association being always to sell their fruit in the market where it will command the best price, and never to force on the market more fruit than it will take without breaking the price. If for any reason the market in a certain section is overstocked, the fruit en route is diverted from that market to other sections of better demand and thus the equilibrium of price is maintained.

There are two methods of selling in the local market—public auction and private sale. Each day, or as often as is necessary, the agent of the association puts up such fruit as he deems wise to be sold at auction to the highest bidder, and disposes of as much fruit as he advantageously can in that way. These auction sales establish a basis of price for the private sales, which are made to people who cannot or do not attend the public auctions. The local agencies sell for spot cash, and losses of the fruit-growers from bad debts and dishonest buyers have been eliminated.

During the market year 1905-1906 the exchange sold, in round numbers, $9,936,000 worth of fruit and lost not one penny—a record unsurpassed. It handles more than sixty per cent. of the citrus fruit shipped out of Southern California. The orange-grower is absolutely assured of a fair market for his product. He has been freed from loss through speculators and commission merchants. He is no longer at the mercy of unknown middlemen three thousand miles away.

The actual cost of marketing has been reduced from fifty or seventy-five cents to about thirty-five cents per box. The exchange has obtained reductions in the transportation and icing charges for both oranges and lemons. The lemon freight rate was cut—though it was later somewhat boosted again. The orange freight rate was reduced from one dollar and twenty-five cents to one dollar and fifteen cents per hundred pounds. This could never have been secured by individual effort and must be credited as one of the profits of union and coöperation.

THE FARMER

STRONG arms have they who turn the turf,
Whose plowshare cuts the grass-webbed sod.
Self-poised and firm they walk the earth,
The splendid instruments of God.
The work they do is a daily need
Whereby the toiling millions feed.

No weaklings they. With face upturned
They sow the seed and reap the grain.
Like children running toward the sun,
They watch the seasons wax and wane,
All joyful of the toll they paid
God's piper for his serenade.

As kinsmen of the things that grow,
And brothers to the horse and ox—
Together toiling, fast and slow,
They change the hard primeval rocks
To smiling pastures and to fields
O'erlaid with goodly golden yields.

They count in vain who leave him out:
Behind the long and busy street
The farmer stands and feeds the rout
That beg of him their bread and meat!
And firm as earth—true as the skies—
In him the nation lives and dies!

JOSEPH LEISER

Headwork on the Farm

I lately enjoyed a wordy tilt between a merchant and a farmer, in which the latter came out "top side." The farmer had spoken of the enormous charges which a doctor had made for about thirty minutes' work. The merchant retorted that a doctor's education requires a great deal of time and money. So far he was on firm ground, but he went on to say that if a physician's work required no more thought and preparation than farming the charges would be very small. This statement started the real debate. The merchant seemed to think that the farmer had nothing to do but to hold the plow and drive the horses, and when the crop was ripe, cut it, haul it to market, and return with his pockets full of money.

The man from the country made it plain that a successful farmer must study the composition of his soil, carefully store his seed and test it to make sure of its germinating power; that he must know not only how to plant and sow, but just when; that he must know how to cultivate so that the moisture would be retained for the growing crop, and he must gather the crop at exactly the proper time, so that it will not spoil and be lost.

During the conversation the silo was mentioned by the farmer. "What's that?" said the city man. He made many statements showing his ignorance of the farm. The farmer soon had him cornered and was laughing heartily. We never saw a merchant more anxious to wait on a customer than this one.

Many of our city friends have about the same ideas of farming. They have no inkling of the brain work the farmer has to do. The successful farmer is a thinking man. He thinks of the right thing at the right time—not like the darky in the story. His master had urged him to do more headwork. Then he was sent to the field to hoe corn. The weeds were thick and the sun hot. A little later, going to the field to see what progress Erastus was making, the master was surprised to see him sitting on the fence with his hoe lying on the ground. "Massy, I is studyin' headwork," explained the darky.

Headwork must be timely. The man who waits to repair his machinery until just before he is ready to use it is taking a chance of loss. The crop is ready, but must wait and waste. Perhaps a number of men have been hired to help gather the crop. They must be paid for doing nothing.

I have found it very profitable to carry a book and pencil and under "Things to be Remembered," write those things that are needed, as I discover them. If some part of the binder is too worn to last another season the number is written in my book while the horses are resting. This plan is followed with everything used on the farm. The repairing is done on rainy or cold days. Money and labor are saved, and worry, which is worse than the hardest labor, is avoided.

The farmers of this country are becoming always more systematic and careful. By the way, that is one of the secrets of keeping the boys and girls on the farm. If things about the farm are neat and in order, if the machinery and tools that the boy uses work well, it will be a pleasure instead of a dread when he is called for work in the morning.

The farmer will always have to work hard with his hands, but headwork will not only lighten his hand work but double its effectiveness. IRA MYERS.

A Lawyer's Adventures in Dairyland

Making a Go of It on Mobile Bay—By H. F. R.

We are at Fairhope, Alabama, in the famous single-tax colony which Eugene Wood wrote up for Farm and Fireside not long ago. We are eighteen miles from Mobile and three miles from the eastern shore of Mobile Bay. We, Captain Jack, Missie and I, comprise the firm of J. R. Crosse & Co., farmers. Captain Jack is the J. R. Crosse of the firm, Missie is his wife, and I am the Co. My own better half is a sort of dazed but magnanimous spectator. Just now she is temporarily absent in Houston, Texas, our old home, looking after family affairs there. Should she like it here as well as I do, we will build a little concrete, tiled roof bungalow in which we can live whenever we feel like retiring to the farm.

Captain Jack is an Englishman. He did not know a thing about farming when we started here a year ago; nevertheless, strange as it may seem, it really makes him mad to tell him so. He spent the best years of his life, as the saying goes, as a broker on the London Stock Exchange. He says they were really his worst years and that he is now for the first time enjoying life—and this, too, on a little farm in what some would consider a God-forsaken country, remote from everything which men of the world usually regard as essential to happiness.

As for me, I am a reformed lawyer. I reformed by jumping the game entirely. I had had enough of it. After thirty years of wrangling, I concluded to have no more to do with stupid judges and fool juries. I am now breathing the air of freedom and I tell you it is great. I would not go back to the bar for a hundred thousand dollars a year, unless I could quit after the first year. Tell me, what of real value could I gain by it now that I am getting to be an old man—nearly sixty years old? When one has learned the lesson of life and gotten the true perspective of things, wealth, fame, power and influence, social prestige and standing dwindle into pitiable little baubles.

My own personal knowledge of farming is not very much, but I insist that I know more about it than Captain Jack, because I did live for a summer or two on a farm when a small boy, while Captain Jack admits that he never so much as harnessed a horse until he was forty years old. But Missie—she is all right. She was born and raised on a farm in Missouri and she loves it and what she knows about farming and doctoring cattle and hogs and chickens and calves would really fill a good-sized book. Of course, we have to remind her occasionally that what she don't know about it would fill a much bigger one.

We have a hundred and sixty acres of colony land. Some time I will tell you about the tenure and terms under which it is held, for we are disciples of Henry George all right. Our land is fenced, and about forty acres of it are in cultivation. It is rolling, sandy, cut-over piney-woods land like most of the poor stuff of that kind in Alabama. We have a pair of mules, a horse, sixteen registered Jersey cows and sixteen calves born since we bought the cows. All but three of these calves are heifers. Was not that luck? We also have a few hogs and chickens and a fine registered Jersey bull.

The regular working force of our farm, now that we are fairly started, consists of two bosses—Captain Jack as boss No. 1, and me as boss No. 2—one hired man, a fourteen-year-old boy and Missie. She helps milk. Captain Jack can't learn, or rather he won't learn, to milk, and I am quite sure I have forgotten how. Herbert, the hired man, lives with his young wife and babe in a comfortable and beautifully shaded little house on the place with a wide screened-in gallery around it, where they can eat and sleep out of doors the year around if they want to. A gallery of that kind is needed in this climate. With one like it one can be as comfortable here in mid-summer as anywhere. I believe it would be called a veranda in the North.

Comfort Comes Easy

We pay Herbert thirty dollars a month and give him his house rent and milk and butter, and he keeps chickens and has his own garden. We pay the boy eight dollars a month and he boards with Herbert at an expense to us of eight dollars more. This relieves Missie of the burden of cooking for hired help and she don't cook much for Captain Jack and me, or for herself, either. You see, we are living the simple life and keeping down expenses at it, too. We put out the washing and buy our bread, and there is precious little baking done in this house. What is the use of it? Why double and quadruple the household work and make a drudge of the housewife simply to tickle a man's palate? It usually takes Missie two minutes and a half by the watch, more or less, to cook a meal when I don't do it myself. And we have bread and butter and milk and bacon and eggs and cereals and fruit and nuts and fresh vegetables and good coffee with plenty of real cream and a chicken now and then.

What more could a couple of philosophers who have retired from the strife and turmoil of the world ask for? And why should not these two precious philosophers, who are engaged in bossing one hired man and a fourteen-year-old boy, sweep the house, make their own beds, and wash and wipe the dishes, and give Missie an easy life of it, too, including a good long nap every afternoon, and especially so since neither of them cares a rap for the dignity which a man is supposed to lose by doing such work?

I must not forget to mention Laney, a colored citizen, who is also on the regular pay-roll, but since most of his time is spent in building fences, clearing land and making permanent improvements, we do not reckon the one dollar and thirty-five cents per day which we pay him when the weather is good as a part of the running expenses of the farm. No more faithful hand, black or white, ever worked for a farmer than Laney, who has been with us since the first nail was driven; and so, too, as to Herbert, who has also been with us from the start. He was born and raised in this county and his ancestors before him for at least two generations. And right here I want to say that the best hands we have had on the place helping put up the improvements have been Southern white men born in this vicinity. We have found no shirks among them, but then Captain Jack has extraordinary tact in the management of hands. I am afraid they would have soldiered on me if I had been bossing the job alone.

A Few Words About Dividends

Now you have the setting of our farm and the photograph shows part of it. As you look at the picture of our concrete silos and tile-roofed buildings, you doubtless ask yourself: "Is it possible for those two greenhorns to make a success of that farm from the money point of view?" And, of course, you shake your head in doubt, to say the least of it. Bless your heart, we have made a success of it already. The farm even now is a paying proposition. We get a dollar a gallon for twenty per cent. cream. We are milking thirteen of our sixteen cows—the others will soon be fresh. Our total output is taken by one man in Mobile and he is clamoring for more. He says it is the best stuff he ever handled in that city, and he is paying us one hundred and sixty-five dollars a month for it. We expect to bring the output up to two hundred dollars by the first of January. We give the man who hauls milk to the Fairhope Creamery three dollars a month for carrying our product to the wharf at Fairhope and bringing back the empty cans and a hundred pounds of ice a day, which costs us forty cents per hundred. The steamer and wharfage charges amount to six dollars and ten cents a month more, so that the product of thirteen cows laid down on the wharf at Mobile nets us about one hundred and forty-five dollars a month.

"We are told we have a model dairy, and we think so ourselves"

Then, in addition to the cash income, those calves are growing up into one-hundred-dollar cows, when eighteen months old and the little orange-trees which we set out in the spring are thriving, and the manure-spreader is making the soil richer all the time.

We are told that we have a model dairy, and we think so ourselves. Everything is convenient and handy, and a little two-horsepower gasolene-engine saves lots of work about the house and barn. This is the daily routine of work on the place: Herbert and the boy appear at a quarter of six in the morning and by half-past seven or eight the cows are all fed and milked, and the cream separated and put in the ice-box. Herbert then goes to the field with the mules and works until four o'clock with an hour's intermission at noon. The boy, after cleaning up the cow-stables and currying the cows and flushing the cement floors and gutters with the hose, a job at which he is often helped by Captain Jack or me, usually gets in half a day cultivating.

In this way, with no extra help to amount to anything, except in silage-cutting and haying times, we have plowed and planted and cultivated forty acres of land this year in corn, cow-peas, sorghum and velvet beans, and we have raised an abundance of food for our thirty-odd head of stock, with the exception of grain and cotton-seed meal, for which we are spending about thirty dollars a month for the work stock and the milch-cows. This cash outgo, however, will be largely eliminated next year and the expense of raising corn and silage will be greatly reduced. For instance, it took eleven acres of land this year to fill one seventy-ton silo. Next year, when the effects of the manure-spreader are apparent, we will fill that silo from five acres of corn—see if we don't!

Now, why does not all this spell profit? It spells an independent living, anyway, despite the high cost of living elsewhere. We can easily keep the grocery bill down to twenty dollars a month, even after my own better half returns to occupy with me that little bungalow, for the groceries are supplemented by the products of the garden, orchard and chicken-yard, and to this will soon be added the contents of our own smoke-house. It is costing us practically nothing to raise the half dozen hogs or so which have the run of a large pasture and keep in fairly good condition on the skim-milk left after the calves are fed. And as for clothing—we can live on our old clothes for years if necessary. You should see Captain Jack's uniform—canvas shoes, cost one dollar and fifty cents; khaki pants, one dollar; khaki leggings, sixty-five cents; blue cotton shirt, fifty cents; a leather belt, seventy-five cents; black necktie, fifty cents, and a big cowboy Stetson hat. That hat cost him two or three times as much as all the rest of the paraphernalia put together, but every man has a weakness somewhere. Everything he wears, except the shoes and hat and the belt and his necktie, can be washed in ten minutes, and since he has any number of duplicates, he generally looks, as the saying is, just as though he had come out of a band box, and this is the case, notwithstanding the fact that he goes puttering around all day long after the hired man and the boy, with a hoe or some other emblem of industry in his hands.

By six o'clock in the evening the work is done. Herbert and the boy are gone home and the cows are comfortably munching the silage. We help Missie clear away the supper-table, which stands on one of the big wide screened-in galleries that inclose our little home on two sides—up-stairs as well as down-stairs. The breeze from the gulf is always cool and refreshing, for our buildings are on a hill, wide open to the winds from every quarter.

We light our pipes, Captain Jack and I, watch the sun set and sit in the gloaming. The world, with its petty interests and quarrels and foolish and absurd ambitions and hateful competitive fights, seems very far away. We are mere onlookers, though the panorama is still interesting. We have withdrawn from the combat—at least from the fight for wealth and place and power for personal ends. We discuss the crops. We plan the next day's work for Herbert and the boy. Then we begin to speculate like this: If sixteen first-class cows will do so and so, what will fifty or one hundred accomplish? And if our two-and-a-half-acre Satsuma orange-grove nets us one thousand two hundred dollars or one thousand five hundred dollars a year after five years, like the one our neighbor, Doctor Smith, has, how much can be made from ten or twenty or one hundred acres of oranges? And if one acre of velvet beans and one acre of chufas will fatten so many hogs, how many will fifty or one hundred acres fatten? And then, before we know it, we dream of the place making money, big money even, and the money-making game becomes once more alluring. The miserable filthy lucre, how attractive it is to philosophers even! Will we ever scramble for it again as of yore, and thus destroy the charm of the independent, open-air, care-free life which we now enjoy so much? Let us hope for the best.

As all roads lead to Rome, so we, Captain Jack, Missie and I, never discuss the improvement of our soil without coming around to the velvet bean, that Prince of Legumes, and so the velvet bean shall be the burden of my song next time.

This is the first of a series of letters in which "H. F. R." will relate to our readers the story of this successful adventure in Southern dairying. Editor.

Hornets Have One Friend

A correspondent writes that he has found hornets to be quite effective in destroying house-flies. He cultivates hornets on his place for this purpose. One of his neighbors had four large colonies on his premises last summer and was not bothered with flies at all. One woman, he says, went so far as to keep a nest of hornets in her kitchen, which effectually rid it of flies.

I have little doubt of the efficacy of this remedy, but it seems to me to be a little drastic, to say the least. The memory of boyhood encounters with this little insect is still painful after the passing of many years. Still, when one remembers that a colony of hornets is composed of several thousand individuals, and that, when available, flies form a large part of their food, and also of that which the workers furnish to the larvæ in the cells of the nest, it is apparent that these red-hot little insects will help very appreciably in the solution of the house-fly problem, if given a chance. If you know how to get along on friendly terms with them, it will no doubt be a good plan to establish an armistice with the colony of hornets which takes a notion to settle in your neighborhood M. G. Rambo.

It never pays to spoil a good hammer in drawing a rusty nail

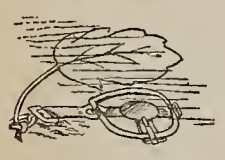
Farm and Fireside's Headwork Shop

A Department of Short Cuts, New Wrinkles and Knacks

Needn't Stop and Figure

HERE is a farm carpentry trick that has helped me and perhaps will help others. It enables one to divide a board lengthways into equal strips without knowing the width of it. Say we want three strips all the same width and using all the board. Lay the tongue of square diagonally on board (see diagram). Now three will go into eighteen without remainder. Place the square so the eighteen-inch mark is on one edge, zero at the other. Now dot the board at six and twelve, making three strips. Now take ruler and gage first dot. Rip off the strip and then gage second dot, and so on. To get four pieces, take sixteen inches on square and make dots at four, eight and twelve. C. G. C.

An Effective Trap-Cover



DID any of you ever set a trap in running water and try to conceal it with leaves and then to your chagrin have the covering float away and leave your trap exposed? I have. Here is a way to overcome that. Get a water-soaked basswood or other large leaf with stem on. Then set your trap, select one of the leaves and put the stem down through the ring where the chain connects to trap, back over ring and down through same hole again. Place your trap in runway, with end of trap where leaf is fastened up-stream, and see how nicely the water carries the leaf over the trap. J. E. WHITE.

Windy-Day Door Stop

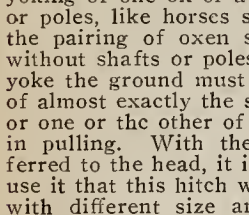
I FIND the above a very handy contrivance to hold a barn door, shed door or gate open. A pointed prop is hinged on the door as shown. Above it is a piece of string or wire on two screw-eyes placed so as to hold the prop off of the ground when you wish to close the door. The prop drags on the ground and holds the door securely open at any point. This saves hunting for a suitable stick or stone every time you want to prop the door open on a windy day.

R. D. WOODMANSEE.

Ox-Hitch From New Mexico

THE head-pad is made out of a curved piece of wood or flexible steel, padded so it is soft and fastened with a chain or strap around the horns, so it will stay in place when no pull is on it. Straps or chains lead from the head yoke to wagon or implement being pulled. The arrangement allows the yoking of one ox or a pair of them to shafts or poles, like horses single or in a team, or the pairing of oxen side by side or in file without shafts or poles. With wooden neck-yoke the ground must be level and the oxen of almost exactly the same size and strength, or one or the other of the animals will suffer in pulling. With the pulling strain transferred to the head, it is claimed by those that use it that this hitch works on any ground or with different size animals, and that oxen so hitched can do more work than when in neck-yokes. H. N. KERR.

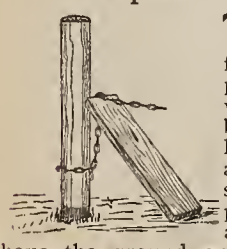
Husker's Buck



IF THE corn-huskers' knees have rusty joints and his back has "kinks" in it, let him use this husking table. Take a couple of two-by-fours eight or ten feet long and nail on legs as for a saw-horse. Have the legs about three feet high. Adjust exact height so you can stand erect in husking. Set two such long horses side by side and throw the shocks of corn across them. You will find that it will save both your back and knees. Use old lumber, as it is lighter than new. One great advantage in husking this way is that one can throw the corn directly into the wagon-box as easily as though husking from the hill.

G. A. KIETLAND.

Simplest Post-Puller

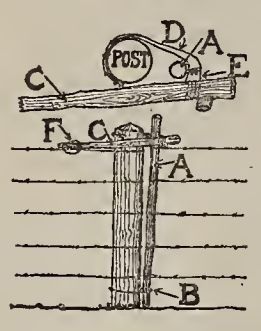


THIS is the simplest device I know of for pulling out old posts, but it works as well as any. Set up a board about three feet long, six inches wide and two inches thick, slanting against the post. Fasten a chain around the post just above the ground and run it up over the board. Hitch a singletree to the end of the chain. One horse can pull an ordinary post with this device. BERNARD BOCKER.

Use for Leaky Bicycle-Tires

HERE is something for chain harness when the leather is worn out. Get a discarded bicycle-tire, and cut it in two equal lengths and slip one part on each chain tug to fill the place of the worn-out leather "piping." I have used them for years and find they are better than leather. D. CONGER.

A Gate That You Stretch



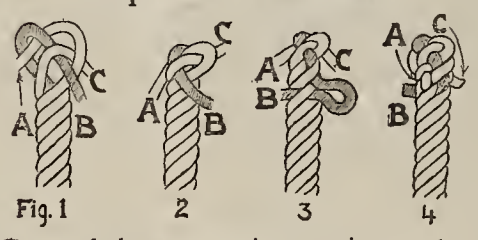
THE advantage in this gate is that you can open up the fence wide enough for any machinery. The gate, in fact, is really a piece of a wire fence. Nail fence wires to a stake (A) four feet long. Staple a wire loop (B) half-way between the bottom wire and the ground, on the gate-post, to stick the stake into.

Now take an oak limb about two feet long (C) with a knot on the end to prevent wire slipping off. This is to be used for a lever to tighten the gate shut. Double three feet of smooth wire (D) in the middle and wrap a piece of wire (E) around stick (C) and also around the bend of the wire D. You do not attach wire D direct to lever C, because you want a looser connection that will not wear out so fast. Staple the ends of D to gate-post on opposite side from that on which the fence wire is stapled, thus fastening lever loosely to gate-post. Hang a loop of wire (F) on fence wire. To close the gate, put stake A into loop B, swing lever around stake and bring it to the fence wire and slip the wire loop (F) over the end of the lever.

A light upright stake may be nailed to the gate wires half-way between the gate-post and the next post, to keep the wires from tangling when gate is opened.

M. L. SCHERFENBURG.

Rope-End Neatness

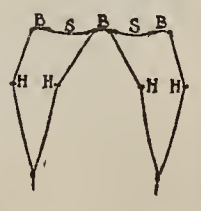


ONE of the greatest inconveniences about a barn in cold weather is to try to put a rope with a knot on it through a small hole.

There are several ways to remedy this difficulty. One way is to have no small holes to put ropes through and another is not to allow your ropes to untwist and become a bunglesome bunch of loose strands.

A very effective and not very common knot is the spliced wall knot. Fig. 1 shows the wall knot started and Fig. 2 shows all of the strands pulled tight. Fig. 3 shows the first step in splicing the ends of the loose strands back into the rope. Strand B (shaded) in this case is used as an illustration and all of the other strands are treated in a like manner with respect to the adjoining strands. After all of the strands have been treated as shown in Fig. 3 they should be drawn as tightly as possible into their places and cut off so that about one half of an inch of each strand protrudes from the rope. The rope is then laid on a smooth board and rolled with the foot until it assumes a smooth, round finish as shown in Fig. 4. E. V. VORIS.

Three Horses Abreast



HERE is my way of driving three horses abreast. The bits are represented by BBB, and the hame-rings of the outer horses by HHHH. Straps SS connect inner rings of bits of outer horses to the bit of the middle horse. These straps should have snaps on each end and a return buckle so as to allow adjusting to exactly the right length. I have tried this plan out thoroughly. C. H. PINCKNEY.

"Where Did I Read That?"

LIFE is too short and time too valuable for man to shorten the first by vexation and waste the second through carelessness. One of the most vexatious things is to try to find things you need in a hurry. In reading one often sees an item of interest which may be used in the future, but he trusts to his memory as to where to find it when needed.

Alas for memory.

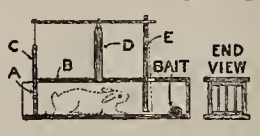
We keep a memorandum-book on our desk and when such items are read the memorandum reads, for instance:

How to get rid of rats—FARM AND FIRESIDE—Sept. 25th, 1910, Page 5, Col. 2.

It requires but a moment to find this item, while if one had to search over a pile of papers an hour might be consumed.

J. H. HAYNES.

To Get Br'er Rabbit



THE accompanying sketch shows a rabbit-trap which I find successful and prefer to steel traps, as it does not injure the rabbit. Make a box about five inches wide and six high, inside, and thirty-two inches long. One and one half inches from ends of side boards saw door groove (A) half an inch deep and chisel it out very smooth. Make top board (B) an inch and a half shorter than sides, to leave room for door (C) to drop. Ten inches from front end, in the middle of top, bore an inch hole and set post (D) made of one-by-two eight inches high. Then ten inches back of post make trigger slot, three fourths by two inches, in middle of top board, lengthwise of trap. Trigger (E) passes through a slot in the balance beam, loose enough so trigger works freely. A nail is driven crossways through trigger. The top of the post (D) is beveled down to an edge. A nail driven down through a loose slot in balance beam holds it on post. When trap snaps the trigger will be lifted out of trap by weight of door; otherwise the rabbit in its efforts to escape will chew the trigger to pieces.

If put together so the trap is just about five inches wide inside, the rabbit can not pass the trigger, but must push it back out of notch in the trigger, which lets door drop. If the rear end is made of strong rods it is handy, as you can then readily see what you have. I have known cats and opossums to be caught in such traps. W. H. G.

A Barrel Smoke-House

HERE is a scheme I have used a number of years. Take a cider or pork barrel, knock out both heads and set it over a hole in the ground about eight inches deep, not quite as large around as the barrel. Dig a trench out from this about a foot long, then a small square hole for a fireplace. Cover this trench with any old pieces of tin or use a stove-pipe or drain-tile so the trench will carry smoke from the fire. Cover tin with dirt and bank dirt all around barrel at bottom. Put a strong stick over top of barrel, hang two hams on same and cover top of barrel with heavy bags or blanket. Use corn-cobs to start fire, then apple-tree chips or green hickory. Smoke two or three days. H. V. D.

Pump-Blanket

A NEIGHBOR kept a wooden pump from freezing last winter by setting the handle as high as possible every night and then throwing a thick blanket over the pump and winding it closely about the pump. W. P.

Should Women Vote?

WE HAVEN'T room for a real, exhaustive, exciting debate on that live question in this little oblong space, so we are simply going to say that WOMEN SHOULD VOTE IN THE HEADWORK SHOP prize-winner elections—one after each issue. So should the man of the house, or the boys and girls. That is to say: Each subscription to FARM AND FIRESIDE carries the right to cast one vote, and any member of the family can send it in, provided the name of the one that takes the paper is given. Votes are counted two weeks after date of issue.

Three five-dollar prizes are thus awarded, by our subscribers, for the three best knacks in each Headwork Shop. You'll see at least three schemes on this page that will give you a lift in your own farm work. Won't you, turn about, give the inventors a lift toward the five-dollar prizes by sending in their names on a postal? Address the Headwork Shop, care FARM AND FIRESIDE, Springfield, Ohio.

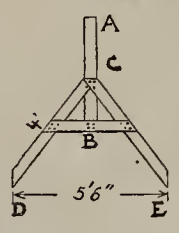
Contributions are welcome in this department. Our regular rates are paid for those that do not pull down prizes. EDITOR.

Barrel-Carrier

A HANDY way to make hand-holds on a barrel is to use the handles of two old shovels. Cut them off at an angle a few inches below the handle, flatten them out to just the right angle with a draw-knife and screw or bolt them to the barrel as diagrammed.

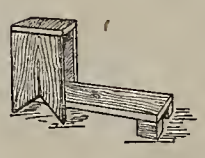
GEORGE FINGERLE.

Measure as You Walk



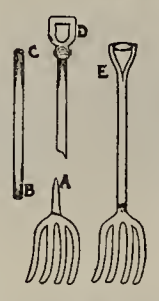
HERE is a device for measuring land, which I have used several years and found very handy. AB, CE and CD are laths four feet long, put together so that from D to E is five and one half feet. Taking hold at A, I can measure a piece as fast as I can walk, counting the number of spaces, three spaces to the rod. The "legs" are pointed at the bottom. FRED E. HUTCHINS.

Pail-Protecting Stool



THIS milk-stool is convenient and comfortable, and when the pail is set on the projecting end it is almost impossible for the cow to get her foot in the pail or kick it over. The pail is brought up close to the udder and if it is one of those with the top partly covered, and if the udder and teats are washed off before milking, almost no dirt gets in the pail, which is also kept clean on the bottom. The board the pail sits on is eighteen inches long and eight wide, the uprights are ten inches high and six wide, and the seat is ten inches across and six wide. READER.

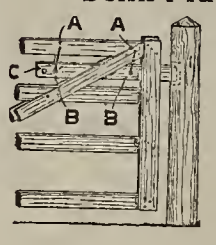
A Handle That Will Last



WHEN your spade handle comes loose and you have a piece of three-fourths-inch or one-inch pipe on the place, then don't worry with the wood handle any more. Have the pipe cut the proper length and weld the piece (A) that is made to go into the wood handle into one end of the pipe (B). Drill a hole through the other end (C). Slip handle D over pipe and fasten with a bolt and nut, and you will never have any more trouble. If handle can not be fastened that way the pipe may be split and a crosspiece inserted, as at E.

ANTON T. PFEIL.

Semi-Automatic Latch



THIS latch may be made of the same material as the slats of the gate, say four inches wide and three feet long, planed down slightly so it will work smoothly in passing between the double brace and end pieces. The particular point is in hanging the latch piece properly. It should be supported in position by smooth wire, bent around through holes (AA) in top slat of gate and around nails (BB) driven through latch. Now, when the latch is in position in slot in gate-post the supporting wires should hang nearly perpendicular, or pushed back a little, as diagrammed, so there will be absolutely no danger of its swinging out of position.

To open gate, pull latch to left—a peg (C) may be inserted to hold onto. The slot in gate-post should be three inches deep and slightly larger than the end of the latch. This works automatically in a way, for when the gate is in position the latch when released will of itself slide into the slot in the post. W. T. JONES.

Headwork Winners October 25

G. J. Schuster - "Handy Post-Puller"
Fred Glesenkamp "Figure-4 Wagon-Jack"
Fred McNeil - "Everlasting Braee Post"

Inside Information for Our Readers

GOOD things are coming your way in our December 25th issue. There is an absorbingly interesting study of the work of Professor Hilgard, the pioneer soil chemist. Every farmer who is managing his soil scientifically uses constantly something of Hilgard's work, perhaps without knowing it. Mr. John Pickering Ross' second article on the comparative problems of English and American farmers; the Headwork Shop; special fruit and live-stock articles, and, in the Fireside section, an entirely new piece of piano music and one of Eugene Wood's pages of laughable philosophy—these are only a few of the features of this big issue.

More "Education" for the Farmer

A new fertilizer paper has been started in the South, which announces that one of its purposes will be to "Educate" the farmer in regard to the great advantages of mixed fertilizers, and the folly of home mixing. One of the means to this end consists of a series of cartoons representing the farmer in a most uncomplimentary way. The text accompanying these is an insult to the intelligence of the farmer. The plan is to have the local papers reproduce these, and in this the aid of the local fertilizer agent is expected. The editorial announcement concludes by stating that: "Once the good work is started, and the editors of the agricultural papers are convinced of the big savings to the farmers from using commercial fertilizers manufactured in an up-to-date factory, the battle will be won."

The battle is not likely to be won at all on this basis. Many local dealers are heartily in favor of meeting the wishes of their customers for raw material. Opposed to this is the attempt of the manufacturer to bind the local dealer not to sell raw materials, and if this fails, the manufacturer will not give the same credit accommodations on raw material as on mixed goods. The custom of manufacturers in giving a local dealer exclusive territory on the firms' brands, and then giving his next door competitor exclusive territory on brands of exactly the same composition but sold under the name of some "Bay window" company belonging to the same manufacturer, and continuing the process as long as the supply of dealers in a given town holds out, is not one that is likely to make the local dealer favor the manufacturers and their anti-home mixing plans, as against the best interests of the dealers' customers.

The editors of the agricultural papers are too well informed to take up any such scheme and they, as well as their readers, know that wherever home mixing has been intelligently tried, the "Big savings" are all on the side of home mixing. It has been repeatedly shown that in factories equipped with the most elaborate machinery for mixing, it is by no means an unusual thing for goods to be mixed by exactly the same process as the farmer would use at home. This is especially true for small lots of high-grade goods made from the best class of raw materials.

Many large factories are returning to the old process of wet mixing, and for this work there is a great advantage in using mixing machinery, since the process involves the use of sulfuric acid and has the manufacturing advantage of permitting the utilization of low grades of raw materials that a farmer would never think of buying, if offered to him in their unmixed condition; it also serves to disguise the filler.

The manufacturers continue to press the sale of 10-2-2 in the South, and 2-8-2 in the North, both of which permit the use of low-grade raw material and filler.

The farmer demands formulas better suited to his crops and soils, and containing less filler. Brands of higher grade are meeting with increased sale, and farmers are learning that they can make their own brands to suit themselves. The ridicule of the trade papers will not deter them in this.

Home mixing is now rendered much more practical and profitable by the fact that dealers or farmers can now buy both nitrate of soda and potash salts direct from the producers, where heretofore they were obliged to get them through fertilizer manufacturers, many of whom placed all sorts of obstacles in the way of such purchases. This dealing direct with the producers of the two substances needed to supplement basic slag, acid phosphate or bone, in producing complete and filler-free fertilizers suited to the various needs of the farmer, results in a marked saving in cost of the raw materials and so adds to the profit resulting from home mixing.

ANNOUNCEMENT

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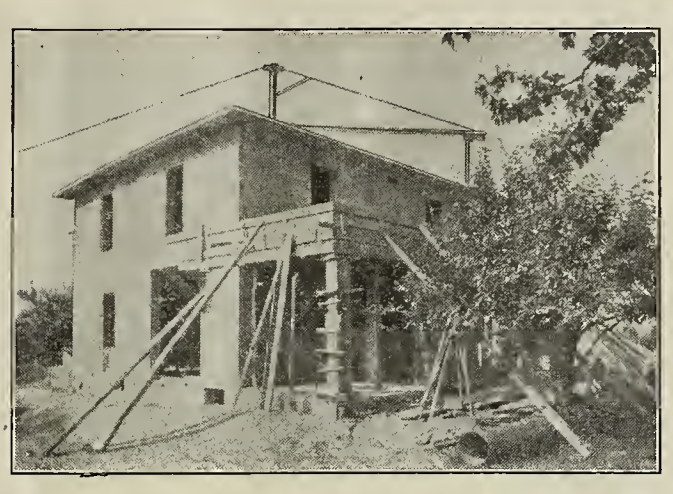
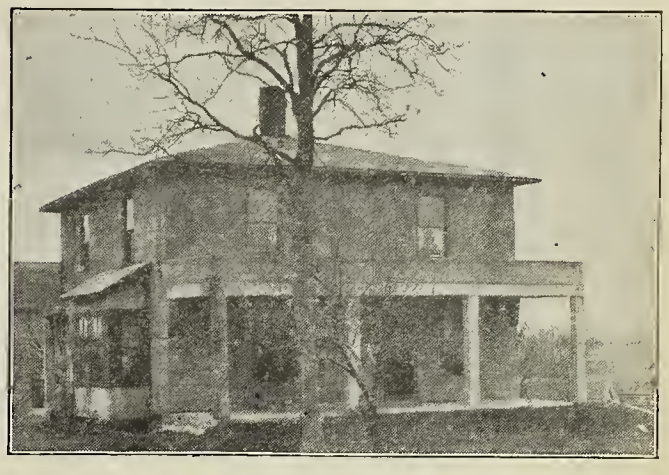
Built His Own Concrete Home

By E. S. Hanson



The House in the Forms



The Finished House

MANY home-builders have I seen grow enthusiastic over concrete as their building-material, but none more so than the man whose house I am about to describe in this article. And one of the chief sources of his delight lay in the fact that he was able to do the work himself, after methods and plans of his own, so that it is now *his* home in a delightfully real sense.

I visited the work while it was in progress, and the memory of it has just been brought back to me by the receipt of a photograph of the completed building as it now stands.

It is at Gurnee, Illinois, and is the home of Mr. H. D. Hughes, who, with his son, Alex. G. Hughes, who was then at home from college for his summer vacation, did the entire job of construction.

Mr. Hughes is a retired farmer, and belongs to that class of men who are not afraid to tackle any kind of a proposition, and who believe that the best way to get anything done is to go at it and do it. This trait of character was well exemplified by a little incident which came under my observation—the day of my visit. I found Mr. Hughes at the blacksmith shop down-town, whither he had taken a wagon to have a wheel repaired. The man-of-all-work at the shop was busy, however, and Mr. Hughes accepted the freedom of the place and proceeded to do the work himself. When I first came upon him he was driving spokes into a hub from which several crippled members had been amputated, after which he trued them down to line and adjusted the felloe. He hesitated only at setting the tire, preferring to await the convenience of the blacksmith for that, and we proceeded up to the new house for a critical inspection of it.

The Working Details

The house is of hollow wall monolithic construction, twenty-eight feet three inches by twenty-nine feet six inches, near enough to square so that the same forms could be used on all sides. The foundation walls are solid concrete ten inches thick. The walls of the superstructure run up flush with the foundation, but have an air space throughout of two inches, giving practically two walls, each four inches thick. For the outside forms ordinary one-and-three-fourths-inch plank was used, cleated together to make a form fourteen inches wide. The forms were constructed to go entirely around the building. Each side of the wall forms was in two sections, bolted together at the corners and held together where they joined in the middle by irons, such as are used to hold the top box of a farm wagon to the lower box. These were bolted through the bottom, the bolts resting on the completed section of the wall, this forming the support for the forms, which were held together at the top by a clamp of wood.

The air space inside the wall was made by the use of two pieces of No. 24 galvanized iron, the edges of which were beaded to give it rigidity. These rested on the bolts which held the forms together at the bottom, and were held in place at the top by slots in the wooden clamp. They were also held apart by blocks of wood two inches thick, placed at convenient distances between the two plates of galvanized iron. These blocks were slightly tapered so that after the concrete had its initial set, they could be partially withdrawn, thus allowing the plates to be more readily removed when the forms were taken down. Before the concrete was poured in, a piece of sheet iron with the edges bent down was placed over the opening between the galvanized plates to avoid filling the hollow between them.

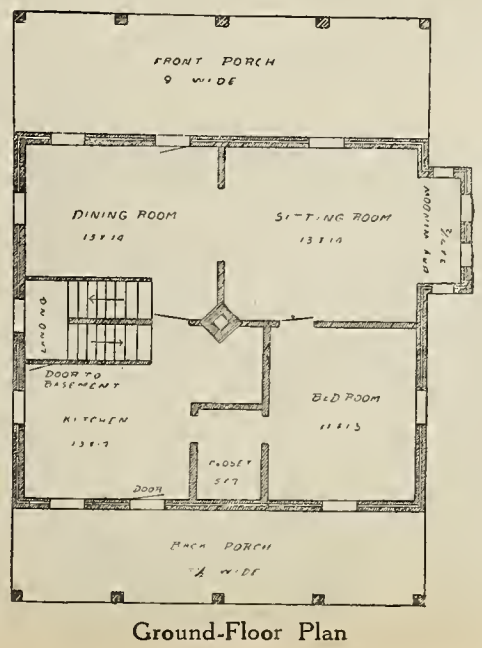
The effort was to make one rise each working day, and this was always done except when the weather interfered.

A one-to-eight mixture of Portland cement with sand and gravel was used. Ten loads of sand and ninety-one loads of gravel were consumed, or about one hundred and fifty-three yards. The sand and gravel were secured about a half mile away, and their cost, including hauling, was fifty cents per yard. The mixing was done by hand in a mortar-box, and the thoroughly home-made quality of the entire structure is attested by the fact that an old woven wire bed-spring was used for a screen.

Mr. Hughes believes thoroughly in a wet mixture for concrete, and it was used on this work, as wet as the proper handling of it would allow. It was sufficiently wet to pour into the forms without any tamping.

Before each course was laid, connecting rods were placed on the preceding course at distances of about sixteen inches apart to bind the two walls together. These rods consisted of sixty-penny spikes on which Mr. Hughes had bent the points during the cold days of winter, simply placing the spike in a vise and hammering the point. Thus the point and head served to hold the walls together. Very little reinforcing was used. At the corners a No. 7 wire was bent at right angles, with each leg about two feet long, and one wire laid in each course. A three-eighths-inch rod also runs entirely around the house, between the upper and lower stories, with the ends hooked together. A five-eighths-inch rod is inserted above the bay-window, also above the basement door.

Even the roof is concrete, made shingle fashion, after Mr. Hughes' own design. The shingles are twenty-four inches long, sixteen inches wide and lie ten inches to the weather. They are five eighths of an inch thick at the lower end and taper back to one fourth of an inch or less. The concrete for them was made in a mixture of one of cement to two of sand, just as wet as possible. The shingles were made right on the roof as follows: For each course nails were first driven into the sheeting and allowing to project about a quarter of an inch, care being taken to drive these so that the points, if going through the sheeting, would go into the rafters instead of making holes in the roof. Any water which might by chance get in around the nails would thus soak into the rafters. After the nails were driven, there was rolled over the roof a sheet of heavy butcher's fiber paper. This was put on for each course the width of the course, extending back onto the sheeting boards and down onto the preceding course of shingles. A board five eighths of an inch in thickness was laid on the preceding course of shingles, giving an edge to work against. The concrete was then poured in and troweled back from the edge of the board to a thin edge twenty-four inches back. The concrete was rounded away from the edge of the board with a trowel as soon as its consistency would allow, in order to avoid having the moisture sink into the board. The shingles were then divided off into sixteen-inch widths, cutting clear down to the paper. The object of the paper was to furnish a partial water-proof surface on which to lay the concrete, thus preventing the moisture being carried off too rapidly, and also to prevent the shingles forming one monolithic mass, which might be cracked in time of frost. About a dollar's worth of the paper was used.



Ground-Floor Plan

The roof was put on by the two men in six days. It would have taken about nine thousand wood shingles to cover the roof, and as this was equivalent to making and laying that number of shingles, it would be considered by the old-time carpenters who made their own shingles an unusually good week's work.

Several people took occasion to warn Mr. Hughes that the weight of the concrete would break his roof down; but the bracing below was so constructed as to show the slightest deflection, and none was apparent.

Since the writer's visit a back porch has also been made. The porches were of a slightly richer mixture than the walls of the house and reinforced with woven wire.

"The Best Man on the Job"

One of the most valuable devices in connection with the construction of the house was the improvised derrick, shown in the photograph, projecting above the roof. Mr. Hughes called this the "best man on the job." The mast of this derrick rested upon the basement floor, coming up through the well which was later occupied by the chimney. The mast was guyed to trees by wires, and other wires were used to give sufficient strength to the boom. The length of boom was such that it carried the concrete to any part of the structure.

The total cost of this little home was $1,575, divided as follows:

Carpentry and labor	$ 500
Material for concrete work, including reinforcement	275
Plastering and expanded metal lathing	150
Plumbing	75
Heating	250
Doors and windows	50
Hardware and incidentals	60
Forms	40
Lumber	150
Painting, mostly oil and varnish, inside	25
Total	$1,575

"To say that we are satisfied with our house would be putting it rather feebly," says Mr. Hughes. "I have sometimes said that I thought it was the only house ever built that gave the occupants the satisfaction that they expected.

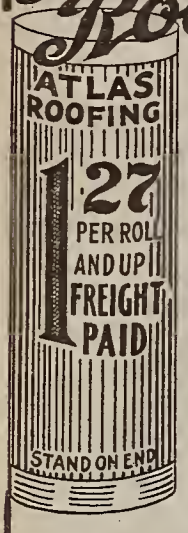
"Everybody tried to scare me with the idea that we would have a damp house, but I could see no reason for it if the walls were hollow. If anything, the air is too dry in the house, as is evidenced by the drying out of furniture.

"I think the idea of making the shingles of concrete, and making them on the roof, is the best work that I did in the whole matter. If the idea could be brought before the building world in the right way, so that they could realize the full value of it, I think that the method would become almost universal, and the spread of fire from roof to roof would be a thing of the past."

The original idea was to give the outside a surface finish of some kind; but, instead, the outer walls were left just as they came from the forms; and there are men of good taste who are now telling us that the ultimate development of a distinctive type of concrete building will be along this line.

Atlas Long Fibre Felt Roofing

The Best Made Will Stand the Test in Any Climate



The long fibre wool felt used in Atlas, is the only kind of material you would have as the base and body of the roofing you use on your buildings, if you knew its superior quality and merit. It holds the roofing together compactly and solidly, increases the endurance, the wear and life of the roof. Remember, a building is only as good as its roof.

We carry large stocks of Atlas roofing at various points in the United States, from which to ship to your station promptly, as soon as your order reaches us. We guarantee safe delivery and satisfaction. Atlas roofing comes in three weights, one of which is just suited to the job you have in hand. The three grades are called Standard, Heavy and Extra Heavy. They are of different thickness, but are of the same quality—Atlas quality—in every case. You cannot buy better roofing, even if you pay more money. If you are not certain which weight you need, send for free samples of Atlas roofing and we will mail you some of each to look over and examine.

All Atlas Roofing is 32 inches wide, and one roll of either weight contains 108 square feet. Standard Atlas weighs 34 lbs; Heavy Atlas, 44 lbs.; Extra Heavy Atlas, 54 lbs. per roll. We have sold Atlas for years—millions of dollars' worth—and know it will stand every guarantee that any roofing will. It is the very best.

No Tar or Other Injurious Substances used in Our Atlas Roofing.

Our Atlas Long Fibre Felt Roofing is better than shingles for new or old roofs. Made of selected long fibre wool felt, saturated with asphalt, surfaced on both sides with a composition which looks like rubber. Always pliable, not affected by heat or cold; waterproof, acidproof, fireproof; will not taint rain water; easier to lay than shingles and lasts longer; no painting or roof coating required. Enough large headed galvanized nails and cement for laps to lay it included with every roll.

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Our prices on Atlas Roofing, freight paid are: To all points south to Virginia, Tennessee and Arkansas and west as far as Kansas, Nebraska and the Dakotas $1.27 per roll for the standard Atlas. $1.58 per roll for heavy Atlas. $1.94 for extra heavy Atlas; to points in Oklahoma, Texas and Louisiana, $1.45 per roll for standard Atlas, $1.85 for heavy Atlas, $2.20 for extra heavy Atlas; to all other points in the United States $1.61 for standard Atlas, $2.02 for heavy Atlas, $2.43 for extra heavy Atlas. Each roll contains 108 square feet and we send enough large headed galvanized nails and cement for laps to lay it. At these freight prepaid prices you must order at least three rolls. If you want samples we will send them free. Send your order or request for samples to our nearest address—19th and Campbell Sts., Kansas City, or Chicago Avenue Bridge, Chicago. 130

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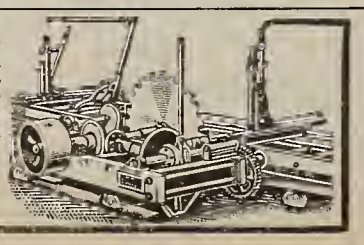

Gardening

By T. Greiner

What Brings Success?

A PENNSYLVANIA reader tells me of his intention of going into the market garden business. He gives me his particular local conditions and his preferences for crops, etc., and then asks: "What in your opinion are my prospects of success?"

I have no opinion on that point. It is true that this man will start in under favorable conditions. He has been brought up and lived to his seventeenth year on a farm. He has sufficient capital to buy the place, equipment and stock. He has a chance to procure manures near by and he has a good local market. He is also strong physically and willing to work hard. All these things augur well for success.

Yet, have you never known people who had everything in their favor when they started, and yet made a signal failure of the undertaking? There are people who can make a failure of everything they undertake, as there are others who, even if handicapped by untoward circumstances when starting, yet will make everything they touch turn to gold. I might form a fairly reliable opinion if I knew the individuality of the man behind the hoe or on the seat of the market wagon. The production of commodities is often one thing, their sale is another. Many products, and sometimes very good ones among them, are annually going to waste because of the failure of the producer to bring them to the man or woman who would like to buy them.

It is not enough to raise good vegetables. You must know how to turn them into money. It is easier, however, to sell good ones, those that tempt the buyer, than to sell inferior ones. In some localities (in my own vicinity in some respects, for instance), the main thing is to have good vegetables to sell. The buyer hunts up the producer. In others the task for the producer is to hunt up the buyer. I have known private consumers from miles around flocking to the farm of a fruit-grower, during the entire strawberry season, and taking his strawberries as fast as they could be picked, paying him far above common market prices, simply because they knew he raised good berries.

Some years ago I had a man working for me who was a first-class salesman. Nothing usable on the place was allowed to go to waste. He knew how to find a buyer for everything in the line of farm produce. This meant success. Then I had a man of same age and training who did very nicely in helping me to raise good vegetables. But he was no salesman, any more than I am. This meant failure, at least comparatively speaking. When I have no good salesman, I do not grow things very extensively.

We find also in other lines that success or failure often hinges on the personality of the salesman. Of two men engaging as competitors in the grocery trade, for instance, one will do better and draw more trade than the other. They may sell the same goods and at the same prices. One, by smiling countenance and winning ways (or "soft soap" if you will), by courteous treatment and square dealing, will know how to make himself popular while the other does not seem to have the knack to win popular favor. These things show what a big factor the personality of the man is who is doing the selling.

Purifying Greenhouse Soils

By neglecting to keep closer track of what our various experiment stations are doing I missed the chance, for this year, to test a new method of disinfecting old greenhouse soil so as to use it anew for growing plants or other greenhouse crops. My practice has been right along to remove the old soil from the house in the fall or late summer and put in a new supply, selecting ordinary rich garden loam and mixing it with old manure, sand, muck, etc. Once I used the formalin treatment of disinfecting the old (once used) soil. If this is done early enough so that the stuff has time to get out of the soil, say a couple of months or so before we sow the seed, it is probably a good and safe way of killing the germs of various plant diseases that are carried over in the soil. But when I once sowed onion-seed on a bed in the greenhouse not more than two or three weeks after it had been soaked with a solution of formaldehyde, I failed to get a plant, and it required several weeks' time longer to get anything to grow on that spot.

The new way of disinfecting, as now found by one of our stations, is to cover the bed six inches deep with coarse manure, in summer, keeping the bed moist by frequent sprinkling, then at time of renewing the planting in late fall or early winter, raking off all the coarser particles and digging the finer portions into the soil. However, I will try this yet on a greenhouse bed which will not be used for planting till we raise tomato and similar plants in February and March.

Odd Things in the Garden

Some of our seedsmen offer seeds of quite a number of little-known and little-grown plants, such as burnet, cardoon, chervil, corn salad, Florence fennel, "udo" (a Japanese salad plant), orach, rampion, scolymus, scorzonera, skirret, besides a whole list of pot, sweet and medicinal herbs. I have grown some (or most) of them, but for a year or so only, and discarded them because we could not find any use, culinary or otherwise, for them. We had cardoon and Florence fennel, burnet and orach, chervil and scolymus, but our folks did not know how to prepare them so as any of us would eat them. We also had good scorzonera roots (often known as black salsify), but we all preferred the common salsify, or vegetable oyster.

From my boyhood days in the "fatherland" I have a recollection of a salad vegetable that we had in early spring. It had a radish-like root, and I believe it was rampion. I have frequently obtained rampion-seed from our seedsmen, and sowed it with great care. But I have never grown even one plant of it. I wonder if there is any one among our readers who has succeeded in growing this vegetable? In that case I ask for some information about it, especially in regard to best ways of starting the plants and as to the value of the thing for salad purposes.

Europeans undoubtedly make use of sweet or pot herbs much more freely than we do here. The flavor of basil, borage, marjoram, mints, thyme, etc., is still faintly in my memory. But after all, in our own household we do not miss any of these herbs, and do not use them even when we have them. What have our readers got to say about them?

Roots in Storage

The beauty of beets, carrots, winter radishes and other roots held for winter consumption is in their freshness and brittleness or, in other words, in the water that is in them. When that water is allowed to get lost by evaporation, these roots become wilted, tough, punky and wortbless for culinary uses. Don't spread them out in shallow layers in a dry room, even if that is a cellar. Put them in big and deep bins or piles in a cool, somewhat damp room. Any covering will protect them, if nothing more than old blankets or old sacking.

Small lots may be put in boxes or barrels and covered with sand or soil. Sods do very well for a covering. We now have a lot of small table beets such as the good woman likes to use for pickling. It is not easy to keep them long in the cellar unless they are thus covered. A good way is to prepare them as for the table and put them up in cans. Sometimes they show signs of mold, in which case they are emptied out of the cans, reheated and recanned. They are very nice on the dinner-table.

Strawberry Bed-Clothes

IF YOU wish this fruit in its purity and in abundance, do not neglect the mulching of the plants as soon as the ground freezes. The purpose is to hold the frost in the ground, rather than to keep it from freezing. It, therefore, keeps the plants from starting very early in spring and putting out blossoms that may be nipped by frost. Then, too, the mulch prevents spattering of soil and grit on the berries by dashing rains, which are always welcome in the bearing season, but which undesirably sand the berries.

Last fall, all the mulching material I had on hand was the wet top of the straw-stack, thrown off just before we began to draw the stack into the barn. This was sufficient only for a very thin coating on the plants, but it answered the purpose very well. Still, I found a considerable quantity of weed-seeds in this top material, mixed in, I suppose, when we cleaned up the barn floor at the close of threshing. The introduction of weeds in the strawberry-plantation means at best a poor second crop from the piece, so it is better to mulch only with clean material, if it can be had.

If the strawberry-grower were always sure of a heavy and lasting coat of snow, such as we had here in western New York last winter, there would not be so much need of a coating of straw. But it is not often that snow stays three and a half inches deep all winter, and it is better to be prepared for considerable fickleness of weather.

CLARKE M. DRAKE.

Prof. H. A. Surface, State Zoölogist of Pennsylvania, has found that trees of all kinds can be thoroughly protected from injury from borers, rabbits and mice, by simply painting the trunks of the trees just beneath and above the ground with a mixture of raw linseed-oil and white lead.

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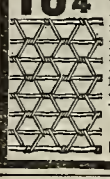

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THEY GROW

Good Humor and Cheerfulness from Right Food and Drink

Anything that interferes with good health is apt to keep cheerfulness and good humor in the background. A Washington lady found that letting coffee alone made things bright for her. She writes:

"Four years ago I was practically given up by my doctor and was not expected to live long. My nervous system was in a bad condition.

"But I was young and did not want to die so I began to look about for the cause of my chronic trouble. I used to have nervous spells which would exhaust me and after each spell it would take me days before I could sit up in a chair.

"I became convinced my trouble was caused by coffee. I decided to stop it and bought some Postum.

"The first cup, which I made according to directions, had a soothing effect on my nerves and I liked the taste. For a time I nearly lived on Postum and ate little food besides. I am to-day a healthy woman.

"My family and relatives wonder if I am the same person I was four years ago, when I could do no work on account of nervousness. Now I am doing my own housework, take care of two babies—one twenty, the other two months old. I am so busy that I hardly get time to write a letter, yet I do it all with the cheerfulness and good humor that comes from enjoying good health.

"I tell my friends it is to Postum I owe my life to-day."

Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Fruit-Growing

Defend Your Fruit

PLENTY of fruit-growers still fail to recognize the San Jose scale as one of their most dangerous enemies. That fact is made plain by dozens of letters received every month by FARM AND FIRESIDE. This insect, so minute in size and so large in destructive possibilities, ruins tens of thousands of fruit-trees every year, simply because the owners refuse to believe that a "bug" so small as to be scarcely discernible to the naked eye can do such injury to their trees.

Other farmers recognize the trouble, but hesitate to invest in the expensive armory of spraying apparatus that the commercial fruit-growers use in combating the scale. People in this dilemma will be specially interested in the experience of Mr. R. E. Rogers, Wood County, Ohio, which he sets forth in the following letter:

> Only last week I was talking with a neighbor, who expected to have a normal apple harvest next season, but stated that his crop this year was entirely spoiled by cold weather. He laid the partly dead limbs and the brown coating on them to the same cause.
>
> I didn't say a word. It was no use.
>
> Another neighbor has an idea that the scale is here, but believes it can be controlled by placing a "catcher" around the trunk of the tree, to get 'em as they trot up and down.
>
> However, the average, well-informed farmer who has a few dozen old trees that are standbys, is well aware of these cold, hard facts: That the scale is here to stay, and that in a majority of cases it may be controlled, but cannot be exterminated.
>
> Now the proposition he confronts is this: Can he, a farmer not regularly equipped for any sort of spraying, afford to rig up for this fight and will the resulting crops warrant the time and money spent for such equipment?

To Suit Middleweight Pocket-Books

To both questions I would answer "Yes." There is no necessity for investing extra money in a wagon or cart especially for this job. I have used the following outfit for nearly all the work on several acres of orchard and find it very satisfactory so far. The pump was purchased for this work and is entirely constructed of brass, except the pressure or air chamber. In getting a pump the most important points to look after are, first, large valves, so any small particle of lime or other like material will pass through without clogging the inner parts; second, very little of the pump should be above the top of the barrel, to prevent catching on trees. The air chamber can just as well be inside the barrel as above. My pump extends less than ten inches above top of barrel and then is too tall at times. I have used for four years a fifteen-foot section of hose, made especially for use in steam, so hot mixtures do not harm it. On the end of this is attached an extension rod—just a regular one-half-inch gas-pipe threaded at the ends. A ten-foot extension was used this fall, which reached the tops of my largest trees.

Don't forget to have a stopcock of some sort installed between hose and extension pipe. It will save many times its cost in wasted liquids when traveling from tree to tree and from orchard to boiling outfit.

This whole outfit is placed on an ordinary farm wagon.

I will not attempt to tell of preparing spray mixtures because of the many "tellings" there have been concerning that part of the business. Personally I believe the original lime-salt-sulphur preparation to be the most reliable and economical to use. By buying the sulphur in barrel lots or hundred-pound sacks, it comes cheap, even as low as two and one half cents per pound.

A Chance to Coöperate

It seems to me that in a neighborhood composed of intelligent and neighborly people, farmers could profitably and conveniently join forces and purchase a sprayer—two, three or four farmers could all have the benefits and yet reduce the expense to each to a very few dollars. I know of two neighbors who have worked successfully in partnership for the last three years. But natural kickers will have to quit their kicking or else stay outside such coöperation.

After some five or six years of spraying for San Jose scale I believe that it is not necessary nor is it wise to delay until March before beginning to spray. It seems to me that there are several advantages in fall or early winter spraying. At that time the leaves are practically all off the trees. The work at regular farming is slack. The insects are "softer" than later in the winter, consequently can be more efficiently reached with whatever "dope" is used. It is more convenient working in ordinary fall weather than in February or March, and the wheels of the outfit do not cut up the orchard as they do when frost is leaving the ground.

In the last paragraph of his letter Mr. Rogers raises a vital point in connection with scale-fighting—getting this orchard enemy on the hip before it has become fully intrenched under its protecting shield-like scale in the adult stage. However, summer is an even better season than fall for this. Tests carried on by a number of experiment stations and individuals during the past two years have shown that the time to most effectually combat the scale is during its greatest activity, in the summer, using the lime-sulphur preparation in diluted form. The standard, full-strength lime-sulphur is reduced with water to what is called a one-to-thirty mixture—that is, one gallon of the concentrate to a total of thirty gallons of the spray solution.

This diluted solution has been used by the Pennsylvania Station for summer treatment of scale-infested trees. Here are the results of the past season's work: The first spraying was given June 22d when both young and old scale were very numerous. In three days after applying the young scale were all dead and the old scale much reduced in number. June 30th more young had again been produced by the remaining old scale and a second spraying was given, the young being all destroyed as before and the old scale still further reduced. July 11th a few young had again appeared and a third spraying was given. On August 20th a most careful examination failed to find any evidence of living scales, young or old.

Recent Cornell experiments tested the value of this same diluted lime-sulphur preparation (both home-boiled and the commercial form, one to thirty, with poison added) for control of scab, blister-mite and codling-moth, in comparison with Bordeaux mixture. Two pounds of arsenate of lead was added to fifty gallons of the lime-sulphur mixtures and also to the Bordeaux. The first application in each case was made just before the blossoms opened, the second just after the blossoms fell and the third two weeks later. The results showed that the diluted lime-sulphur with the poison added was just as effective in preventing scab and insect injury as the Bordeaux and that it did not russet the fruit as did the Bordeaux. The foliage was bright and healthy with all the treatments, but where no treatment was given the fruit was scabby and wormy to a large degree.

The experiments carried on by these stations, supplemented by others, public and private, give strong grounds for orchardists to hope that the diluted lime-sulphur spray plus poison can be employed successfully in the spring and summer to control codling-moth and other insect pests, likewise scab and similar fungus diseases, as well as to control San Jose scale.

Mr. Rogers' experience confirms the efficacy of the winter treatment; but can the orchardists afford to spray in the winter for scale and in the spring for fungus diseases, codling-moth and other insect pests, when diluted lime-sulphur and poison applied in the spring and summer will control the entire bunch? B. F. W. THORPE.

More Apples!

WHY do not the farmers of the middle West grow more apples? That fruit of fine quality can be grown throughout this entire region is proven by the orchards scattered here and there which yield a high-grade product wherever they are properly cared for.

The old settlers, who looked upon their farms as homes upon which to raise their families and spend their lives, always planted orchards. They considered them as one of the essential comforts of life. Of those of us whose memories go back a quarter of a century and more, who does not recall fondly the old family orchards where the old-fashioned apples grew?

But the newer generation seems to look upon the farm merely as a business proposition out of which the owner strives to make his "stake" just as quick as he can, and then retire to town to live upon his income. Most of them give very little attention to orchards. They have let the old ones their fathers planted and cherished go to ruin for want of care. They have cut them down to make room for hog-lots. This fine country, which can grow as good apples of certain varieties as any of the special fruit-growing sections, must look to the extreme East or West for fruit and pay a big price for it.

It should not be so. This great middle West has skimmed the cream off the soil with corn-raising, almost as with a patent separator. Methods must change. It will be a good day when the farm becomes a home once more, and when the fine family orchard becomes a feature of it. A cellar with rows of barrels filled with fragrant apples! Wouldn't it be nice, now? M. G. RAMBO.

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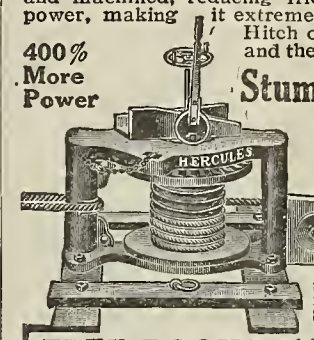

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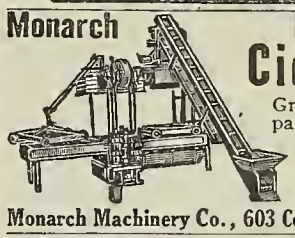

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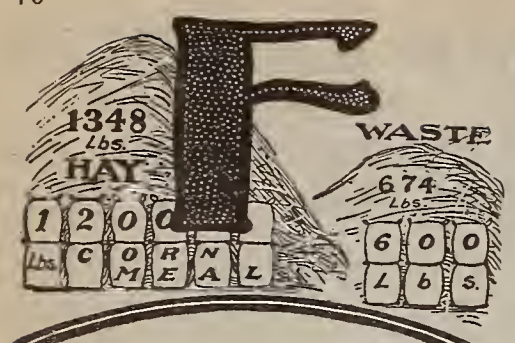

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Live Stock and Dairy

More Silage, More Milk

Am I doing as well by my cows as I ought? Am I producing milk as economically as might? Is it possible that, with such feed as silage, my cows may be kept in a more healthful condition, because this feed having in it the natural juices makes it more easily digested and a cow is able to do more and better work?

When a man gets his thinker going something has got to come. There is no question in my mind but that a cow to do her best work and be developed to her greatest capacity has got to have such feed that does not tax her digestive organs too heavily and keeps her healthy.

No douht; hut many farmers who have recently built silos and many who did not build are asking themselves the ahove questions, and well they may. Those who have built and now have good silage are getting their eyes opened, and those that have no silo are now beginning to see "the handwriting on the wall." Grain and hay are high these days.

A natural feed of this character which has the natural juices all retained in it keeps the digestive organs of the animal in a cool, laxative condition and permits us to feed more heavily of other feeds, and thus we are able to increase her capacity for producing milk in a far greater degree.

Experience has taught me many things about the silo. When I put up my first one I was taught that almost anything would do for a silo, and that almost anything could be put in. The first year I planted a late-maturing corn that grew and grew as though it had all the time in the world to get ripe in, and when the time came for filling the silo it was scarcely in good roasting-ear condition.

What was the result? A watery lot of stuff in a very acid condition that had to be fed in a limited way to keep the cows from scouring and getting off their feed. This was certainly discouraging; hut a man who makes a success with cows must have grit enough to meet discouragements.

I found out that year that to have good silage I must plant a kind of corn that would mature early and get it out in time so that it could mature—that I had better sacrifice some on quantity and have a better quality. From that year the silo has been filled with the same kind of corn that was raised for field purposes, and there has never yet been a single failure.

There is no secret ahout having good sweet silage—just plain common sense. First, the silo must be made in such a way as to exclude all the air. Then, the foundation must be good, to prevent settling and cracking. The material used may he either wood, stone, brick or cement. Iron or steel cannot be used, as the moisture and acid in the silage would soon rust through.

All stone, cement, hrick silos, etc., must be reinforced with wire or rods to insure strength. A wood silo made round is, of course, strengthened hy the hoops, and that is the only kind that should be built of wood.

The size of the silo must, of course, depend on the amount of stock you wish to feed, as a certain amount must he fed each day to keep the top layer from spoiling. Narrow and deep is the right construction, and the deeper, the better, as each added foot gives added weight to the silage and helps to make it more solid and exclude the air. To insure long service, wooden silos should be lathed and plastered or bricked on the inside; this keeps the silage from coming in contact with the wood and does not permit of that wetting and drying which soon decays the wood.

If a silo is made too large in diameter, and this I helieve to be a very frequent error, one of two things will happen—either the silage will be moldy all the time, owing to the inahility to feed it down rapidly enough, or else the cows will be fed more than they should have, in an attempt to keep ahead of the molding.

I strongly favor the use of silage in summer to hold the cows to the work and not allow them to shrink in the milk-flow during the short pastures of July and August. I think many cows may be made to add twenty-five per cent. to their year's production by tiding them over this time. I have tried soiling, but never found anything so cheap, so good and so convenient as silage.

A few feet in the bottom of a deep silo will go a long way for summer use, and there the conditions are most favorable for the preserving of the silage, as the enormous weight of the corn in a deep silo has compacted it, and its heing down near the hottom away from the circulation of the air helps very materially in its preservation.

The quality of the silage may be materially hettered by using care in taking it out. Don't put the fork down five or six inches deep, as though you were pitching manure, but use a fork with tines close together and skim off the top, only loosening what you need for the day's feeding. Keep the surface level, and perhaps a little lower near the outer wall.

Silage cannot be handled as carelessly as ordinary roughage. The cows in eating will throw some out of the mangers and some may be scattered along the feed-alley. If this is allowed to remain there, it will soon cause a bad odor. The man that uses the hroom freely is the one that has the sweet-smelling stahle—a condition worth while, for milk takes up a foreign odor with surprising rapidity, and unless everything is sweet-smelling the milk will tell it, and eventually the customer will find it out, and take his trade elsewhere. R. B. Rushing.

Don't Let Jack Frost Cut Your Profits

Winter feeding should produce an actual profit. It should not merely "tide over" the stock. It does not pay to tie oneself up in a never-ending round of feeding and care of stock unless there is a profitable gain in size, meat or products. Yet every year horses, colts, dairy cows, heef cattle, sheep, hogs and poultry in countless numbers are fed in such a way that no profit is made and come out in the spring in such condition that they would not sell for as much as they would have brought the fall before.

There are many animals from which it is impossible to make a profit with any kind of feed or feeding, but these the business-like farmer will dispose of hefore he enters upon the winter feeding. The excuse for keeping unprofitable stock to convert roughage into manure is not a valid one. It would be better economy to plow down crops and thus save cost of harvesting and fecding, if above this work and cost, the animal will not return a profit. The manurial value of grass, grain or hay is not increased hy heing converted into barn-yard manure, but, in fact, is diminished.

On the other hand, many good and would-be profitable animals are fed so meagerly, or on rations so poorly balanced, that they are not profitahle. Good work horses, because they are idle, are fed barely what will keep them living, and spring finds them weak and unable to do their hest.

How to feed the team most economically, especially when there is no work for them, is a good deal of a prohlem. If there is any place where wheat or oat straw can be economically fed, it is to this team to supply a part of the filling and fiher. This, with well-made clover-hay and corn, or timothy-hay and oats, will keep them in good condition and maintain their muscles. It has been found economical to have the grain finely ground for horses over twelve and under five years of age. The teeth of young and old horses will not usually allow them to thoroughly masticate whole grain, hence there is a loss either of grain or flesh or both. It was found at the Ohio Experiment Station that mature horses were kept in as good working condition the year around when fed clover-hay and corn on the cob as those fed a more varied ration including oats, and that it was much more economical. It pays to feed the colt generously of ground oats and corn and wheat-bran, one third each hy weight. Let him have plenty of exercise in the barn-yard with an open shed for shelter. Be generous with the feed, water and exercise and don't "baby" him.

What shall we feed the milch-cow? First be sure she is worth feeding. Then feed her plentifully. In the first place, a milch-cow must have all the roughage or filling she can eat, if she is to do her best, and the more nutrition this roughage contains, the better the results. The place for straw is under her, unless there is nothing else for filling. Silage and alfalfa produce milk cheaper than any other combination. Silage and hay or shredded corn-fodder with enough grain to balance the ration is probably the next cheapest. Where silage is not provided, wet brewer's grains and corn-chop make a very satisfactory ration. At present prices, both linseed and cotton-seed meal are economical sources of protein, cotton-seed meal going best with ensilage, linseed with dry roughage.

The very best tahle of rations, however, is only a guide which the observing and careful feeder may use as he studies the needs of his animals. The men that are making the most out of dairy and beef feeding keep an eye on every animal, note the production and "individuality" of each, and modify their rations accordingly.

And those promising heifers—keep them growing on nearly the same feeds you would give a milch-cow, in order that they may develop milking qualities and propensities. Don't stint them. A straw-stack heifer will make an unprofitable cow. R. P. Kester.

Prefers Swine to Sheep

The question as to whether hogs are more profitable than sheep depends somewhat upon location, soil and markets. If your farm is rough, hilly upland with a fair stand of nutritious grass, it would be well to raise sheep; but if level, inclined to he wet or well suited for corn, wheat and the legumes, it would be wise to keep hogs. The writer was raised on a good grass farm here in southern Virginia, undulating, dry and fertile. I began with fifty scrub sheep and twenty-five scruh hogs; fed, provided good sheds and cared well for both, paying especial attention to the sheep. After five years I found I had made very little on the sheep, but good money on the hogs. I found the sheep were always ready to lie down and die. Disease was ever ready to attack them or some accident to happen. Twice when I left them out at night, they got on the railroad and a good many were killed. Once foxes attacked the lamhs, killing fifteen. Vicious dogs were always prowling around on the lookout for sheep, so I had to have my flock put in a lot near the dwelling every night in summer. Sheep have never been as great a success in the South, nor in the North or West, as they have been in Europe. Experience in the old countries teaches that they must have a shepherd always at their heels to keep off enemies, look after the weakly and see that the mothers do not desert their young. High-priced land and dear lahor sound the death knell of a profitable sheep industry. Sheep require extra good fences.

I got rid of my scrub boars, bought pure-bred Berkshire males and secured thorough-bred rams for my flock, but the result was the same, the pigs came out a long way ahead. So I disposed of the sheep with no regrets. In comparing sheep with hogs as money-makers, it must he borne in mind, I tested both animals under my conditions with the results named. I do not refer to those conditions where people keep hogs in barren lots and feed them on high-priced grain or mill-feed; the hog must have a good range and access to clover, alfalfa, cow-peas, soy beans or other legumes. These things are easily raised and ought to constitute the larger part of the hog's ration. Of course, he must have some grain all along. Put your hogs in clover or alfalfa, giving each an ear of corn night and morning, and they will keep in fine breeding condition. As a rule hogs are healthier than sheep and much less liable to accident. Out of a large number of hogs I had only six to die in ten years.

Nature created the hog a healthy animal; man's mismanagement and imprudent feeding brings on most of the diseases that do attack him. There are a few farms that are suited to raise both sheep and hogs; and few farmers succeed when they attempt to raise both on a large scale at the same time. Of course, it is possible, but the probabilities are, if you are growing the usual crops, you won't have time to give the proper attention to both hogs and sheep. Cows and hogs fit in together much better. I finally got rid of the grades and loaded up with pure-breds and made more money on these than on the sheep and hogs together.

The ewe's wool will only pay for her keep. A ewe will average one and one fourth lambs a year, which at five months old will sell here for seven dollars and fifty cents.

The grade Berkshire sow will farrow sixteen pigs a year; four of them will he runts selling for twelve dollars. The remaining twelve pigs at five months old will sell for six dollars each=$72.00, totaling $84.00. Cost of feeding a sow twelve months and both litters until five months old, $30.00.

Net profit on sow, $84.00—$30.00=$54.00.

Net profit on ewe, $7.50+$2.00 for manure =$9.50. E. W. Armistead.

Shoe-Boil and Stumbling

A New York subscriber asks what will cure a shoe-boil. I cannot give much encouragement in cases of that kind. In the only case of the kind that I ever had I let the horse run barefooted and also wrapped up his fore feet at night in soft cloth, meanwhile rubbing the swelling daily with one of the standard commercial "spavin cures." This treatment reduced it considerably, but did not wholly remove it.

The same subscriber wants to know what to do in the case of a horse that travels low and stumbles occasionally. A skilful horse-shoer can shoe a horse so as to increase the knee-action a little. Some experimenting with light and heavy shoes will be necessary, as no two horses require exactly the same treatment. But if a horse naturally travels low, it is hard to make his habitual gait much different. If the stumbling is not of undue frequency, the fault does not seem to me a very serious one. David Buffum.

Live Stock and Dairy

What Spoils Winter Butter

THERE is more poor butter made during the winter than during the summer, although the natural conditions are more favorable. Poor butter in the winter is due, largely, to the fact that the cream is kept too long and not sufficient attention is given to its keeping and ripening.

At this time of year the dairy cows are well advanced in their lactation periods and many of them are dry. As a result only a relatively small quantity of butter is made. In order to avoid small or frequent churnings, the butter-maker often attempts to keep the cream too long, and even while it is being saved does not keep it properly mixed. It takes on an old taste and imparts the flavor to the butter. One of the first precautions to insure good butter in the winter is to avoid keeping the cream too long, even though a small quantity must be churned at a time. If proper care is taken of the cream it may be kept a week, but for best results no longer than that.

Another requirement is to keep it thoroughly mixed, both while it is being saved and during its ripening process. It should be mixed whenever fresh cream is added to that which is being saved, by agitating with a regular milk-mixer or an old-fashioned churn-dasher, which works up and down through the cream, mixing the upper parts with the lower. The cream must be allowed to cool before pouring it into the storage-can. During the winter it is well to let morning's cream set until night and night's cream until morning, before mixing with the other cream. This gives it plenty of time to cool. I have known many who run the cream from the separator directly into cold cream left in the can, but the butter was not first class.

Again, the separator is often the cause of poor butter in the winter. The bowl of the separator collects most of the filth that finds its way into the milk, and when it is left without washing for several days, it becomes very foul. None of us would think of drinking water that had passed over such a layer of filth; neither should we be willing to eat the butter that had been so contaminated. The separator should be washed and scalded at least once daily throughout the winter. The milk in it may not sour, but it gets dirty, because in the winter more dirt and manure particles get into the milk from the cow, and this foreign matter is mostly left in the separator.

During the winter extra precautions to insure cleanliness should be taken at milking-time. The cow, when she has to lie down in the stable, gets more dirt on her than when she has the freedom of the pasture, and consequently the milker must exercise greater care to keep this dirt out of the milk and to filter out that which does get in. Plenty of clean bedding should be provided and the cow's udder carefully brushed off before milking. These precautions may seem foreign to butter-making, but they are absolutely essential if best results are to be expected.

While the cream is being saved for a churning, it should be kept where it is cool, but for ripening it requires a warm room and may be kept in the farm kitchen, where the temperature is nearly uniform. A "starter"—of buttermilk or sour milk—may be mixed with the cream if it does not ripen of its own accord.

It should be churned at a warmer temperature in winter than in summer. Generally about sixty degrees is nearly correct. One must regulate this according to individual conditions. It should come in the granular form in about forty-five minutes.

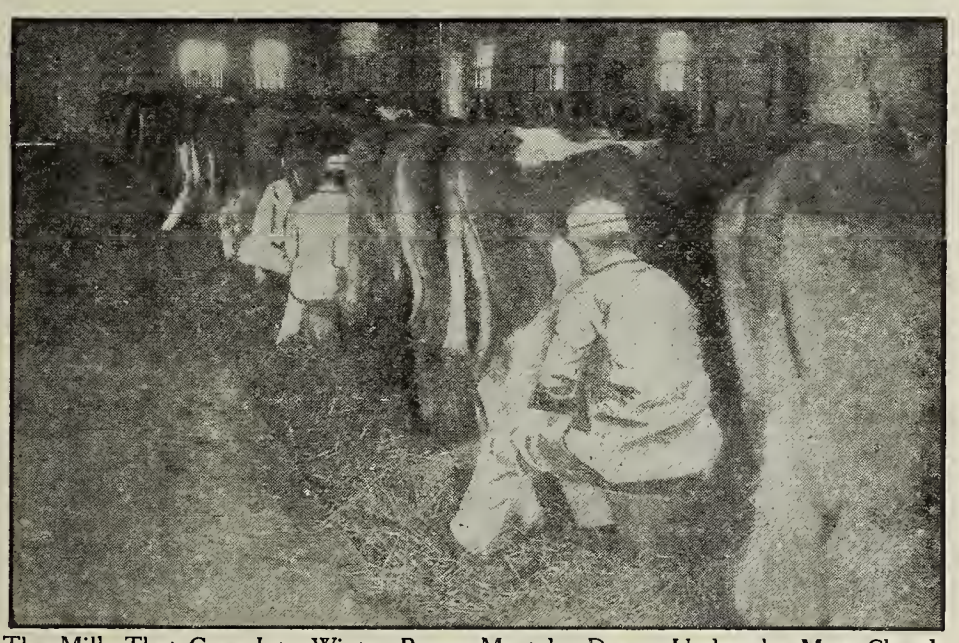
One must not take advantage of the winter's naturally favorable conditions for butter-making and "ride a good horse to death." The work must not be made too easy, because while temperature conditions are favorable, there are other requirements that, if neglected, will offset the beneficial effects of the favorable conditions. It is possible to make an extra fine quality of butter in the winter and makers should excel their summer article.

LYNFORD J. HAYNES.

Pure-Breds Versus Cross-Breds

MR. CHARLES B. CORBIN, writing from Lyon County, Kansas, makes a convincing case for pure-bred as against cross-bred hogs. His experience goes to show that there is money in pure-breds for the general farmer who does not care about fancy or show stock, and who does not make it his main business to produce breeding stock, but who wants the hogs that will turn their feed into meat most quickly and economically. Mr. Corbin says:

> Ten years ago I thought, like most of my neighbors, that pure-bred hogs were more difficult and expensive to raise than cross-breds or scrub stock. I had the Chester White and Poland China cross. The pigs were all sizes, with plenty of runts.
>
> Then I purchased two registered Duroc Jersey sows that had been bred to a registered male and were due to farrow in a few weeks. I got nine pigs from one and eight from the other, and there was but one small pig in the two litters. Sixty head of cross-breds were born about the same time. I fed and cared for both lots just the same. The pure-bred pigs were all gentle and took on fat as quick again as the cross-breds. It was no trouble to confine them in yards, while I was on a dog-trot constantly to keep my mixed lot at home. At selling-time the pure-breds beat the cross-breds from twenty to forty pounds a head.
>
> I still hung on to the cross-breds for four years, keeping the red hogs pure bred at the same time, and it was the same thing every year. It costs a little more to start with pure-breds, but you make more out of them at no greater cost for feed. You can sell some of them for breeding purposes for eight to ten dollars more per head than the others, even if you do not specialize in breeding stock. There are fewer runts, and sows and pigs are easier to handle. They make profitable weights at an early age. I sell mine at seven and one half months weighing two hundred to two hundred and fifty pounds. We enjoy having the clean pure-bred stock, uniform in size and color, much more than we did the cross-breds of all degrees of size and quality.
>
> To-day there are ten full-blood hogs on farms where there was one ten years ago and the same is true of cattle and horses and chickens and sheep. The sooner you get in line, the better. Try it, brother farmers, for yourself. My own experience has been all favorable.



The Milk That Goes Into Winter Butter Must be Drawn Under the Most Cleanly Conditions Possible

No More Tail-Switching

"HOW can a horse be broken of tail-switching?" asks a Maryland subscriber, whose driving mare, now four years old, acquired the habit as a colt.

The best plan is to tie down the mare's tail whenever she is driven and keep this up for several months, if necessary, until she forgets the habit. Make a few strands of hair on the inside of her tail into a braid about the size of a clothes-line, and finish it in such a way that it will not come undone. Pass a shoe-string through this braid and tie it firmly to the breeching. This arrangement will effectually stop the switching and is so inconspicuous that the majority of people will not perceive it. This scheme is applicable in all cases where tail-switching is strongly established.

Make it a point also to be very quiet and gentle with the animals that have this habit, both in the stable and when using them. Be deliberate in your movements and do not speak to the horse loudly or harshly. Tail-switching indicates a nervous irritability and the less that is done to rouse this, the quicker will be the cure. A few years ago I bought a young mare who had the habit and in a few months she got entirely over it, with no treatment whatever, except using her gently and "horse fashion."

The age of our inquirer's mare is in her favor and there is no reason why a cure should not be effected, though the early age at which she contracted the habit will perhaps make the cure rather slow.

DAVID BUFFUM.

Getting the Sheep Home

WESTERN sheep often bother people who are driving them for the first time. With them a good dog is worth three men. As soon as it gets the least bit dark they want to bunch up, and if you ever allow them to get bunched, you will have a time starting them. They will also do this during the day. They start by circling around.

The best means that we have found when it comes to keeping them going is for one man to start on ahead with a small bunch, and the other sheep will generally follow. It often happens that you will have to string the entire bunch out in order to get along at all. We have had five hundred strung out for over three quarters of a mile.

C. A. WAUGH.

Tricks of the Stockman's Sales—a valuable selling lesson for the man that handles any kind of stock—in this department, December 25th issue. Watch for it.

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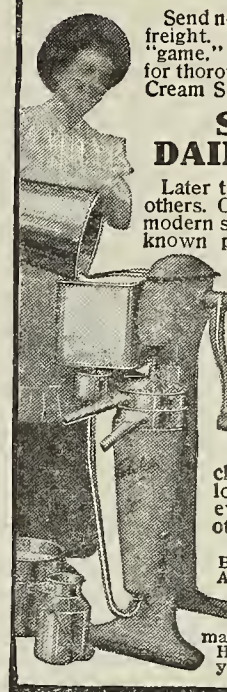

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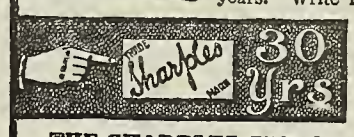

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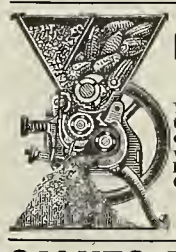

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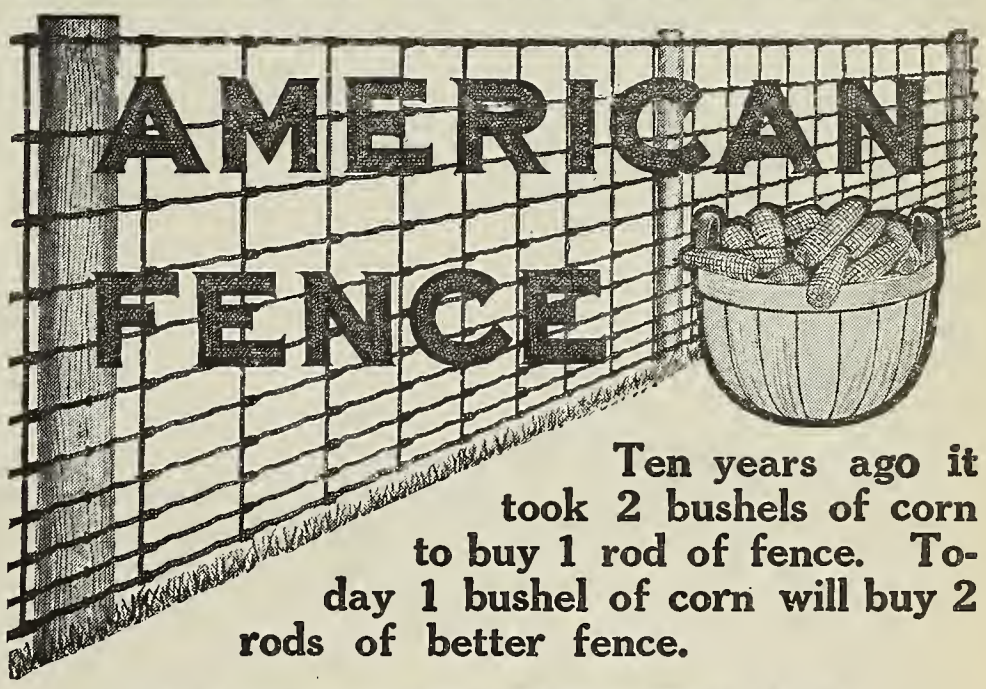

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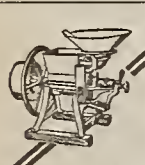

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Is Your Butter Adulterated?

YOU would be justly indignant if that question were put to you. But would you be absolutely sure of yourself in your denial? Some very conscientious dairy people got into serious trouble recently, here in Iowa, through ignorance of or carelessness concerning the moisture required by law in butter made for sale. You may not hide little stones in your butter to increase its weight, as it is said some butter-makers did forty years ago, but if, through carelessness or for any reason whatsoever, your butter contains sixteen per cent. or more of water, legally speaking it is "adulterated," however ignorant you may be of Uncle Sam's moisture regulations or however innocent of any intentional wrong.

We are not going into the business of manufacturing adulterated butter, so have no vital interest in the special tax of six hundred dollars per year that such manufacturers must pay before beginning business, nor in the prescribed-by-law method of packing this kind of butter, an infringement of which means fines and imprisonment. But we are vitally interested in knowing whether the butter we send to market from our farm homes or small dairies is liable to bring upon us a fine of from one thousand to five thousand dollars and whether our merchants are liable to prosecution because of our ignorance or carelessness.

Cream that is thick enough to permit of being churned at fifty-six or fifty-eight degrees should produce butter that can be worked out good and dry and the use of a brick mold is a further aid in expelling surplus moisture from the finished product.

If cream is too warm by even a few degrees, the butter will come soft and will resist all attempts to work out its moisture. It will probably require several coolings and workings with a final stand of a day or so in a cool, dry place to "shrink it."

Care in churning and working are usually all that is necessary to produce a good grade of butter, but occasionally something will go wrong, so if one is not very sure that the butter is all right, it should be tested for its moisture. That is really the only safe plan to follow at any time and there is a simple method recommended by government officials. It is this: Weigh out ten grams of butter on a little pair of scales that records grams, put this into an aluminum cup or Patrick's test tube and boil out the moisture over an alcohol-lamp. Weigh what is left and divide the loss in weight by the ten grams. The result will be the per cent. of moisture in the butter.

For this little trouble one cannot risk infringing on a strict law—and the law is entirely just, too. We are demanding unadulterated foods of all descriptions and it is quite right that the consumer should not pay for an abnormal quantity of water when he asked for butter. If he really wants "moist butter," he can get it under its special label at a cheaper rate than legally "dry" butter. MRS. FRED NISEWANGER.

Case for Doctor and Lawyer

AN OHIO friend of FARM AND FIRESIDE raises a question of interest to horse breeders. His mare, seven years old, was injured in service. For several days after she was in distress, down most of the time, and ate little. This condition continued more than a week, and has recurred a few times since, though with less severity.

In such cases it would take a skilled veterinarian to find and treat the injury. If such a man can be secured, he should be called in, though such cases cannot always be helped.

Our inquirer wants to know whether he can recover damages from the stallion owner.

In case he was careless in any way in the handling of his horse he would be liable for the result of his carelessness. The owner would, however, have to prove his carelessness, in order to hold him responsible. Most stallion owners advertise the use of their horse with the understanding that all accidents are at the risk of the owner of the mare. Unless witnesses distinctly testify to carelessness, the court would likely decide on the basis of the contract, which was that the owner of the mare assumes all risk, and call it an accident. This mare should not be bred again until some competent man has made an examination and found out whether it will be safe to breed her. C. D. SMEAD.

Try how the frosted bridle-bits feel in your own mouth some of these crisp mornings, and you'll warm them up a little the next time, before putting them in the dumb, helpless horse's mouth.

Good bedding is not only comfortable and beneficial to the stock, but it absorbs many juices and liquids, which otherwise would be lost, retaining them to be deposited on the fields as valuable fertilizers.

As the weather grows colder, run about a quart of hot water through the cream-separator to warm up the bowl and other working parts; otherwise the first in-flow of milk will lose part of the cream before everything is warm enough to run smoothly.

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Practical Poultry-Raising

Poultry Precepts for December

SELECT any old hens whose laying powers are diminished, fatten and dispose of them. Confine and fatten all remaining superfluous male birds and dispose of them for the Christmas market.

I believe in feeding dry feed in the morning and a hot mash at night, rather than starting the day with the mash. Add one third of corn to the night mash as this gives additional warmth during the long night.

Care must be taken that no drafts circle about the fowls at night.

About the middle of December, the sods which have been growing under glass may be placed where the hens can get at them. When the blades of grass have been pecked off, a fresh box may be substituted and the old one returned to the glass frame to sprout again under frequent wettings. This plan takes quite a bit of work, but I have found it pays, when the flock is moderate sized and greens scarce.

The floor under the roosts should be cleaned each day and clean dry ashes scattered about. M. ROBERTS CONOVER.

The Floor Question

WHAT is there about the hen-house that is more important than the floor? Here the hens spend about half of their time, if confined inside the building, and for this reason it should be of good material and kept in proper shape. I hear it said that a dirt floor is best for hens because it's the nearest to nature. But there is a lot of difference between dirt made more or less filthy by droppings and litter and dirt out in the field where it is clean, pure and dry. It is possible to have a dirt floor in just as good condition for poultry as any floor, but keeping it so calls for a lot of extra work. Besides, many hen-houses are on ground where there is dampness working up all the time, which keeps the litter soggy and cold.

It is claimed by some that a dirt floor is much better than any other because the fowls can roll and dust themselves on it. It does not seem to me that a mixture of dirty dust, waste feed, litter and filth is suitable stuff for a dust bath. In fact, one reason for keeping the floor clean is to prevent the hens from dusting there in disease-producing material.

The floor that suits me best is one made of wood. If you want to make this soft like a dirt floor, put on a few inches of sand or fine gravel and on top of that the litter. But I seldom have sand on a board floor, for I don't think it necessary.

Cement is my next choice to wood. It is probably cheapest in the end, because most durable, but it is a conductor of both cold and moisture, and inferior in this respect to wood, which is a non-conductor of cold and dampness.

One objection made to board floors is that rats get in. There will be none of this trouble if enough room is left between floor and ground—at least a foot, and two feet would be better. There should be an opening or two on opposite sides which may be closed in cold weather. Dogs and cats can then get under, and if all rubbish is kept cleaned up around the premises, there need be no fear of rats. V. M. COUCH.

Valuable Goose Pointers

CONTINUED high prices for geese and feathers, and the low cost at which they can be grown should greatly stimulate the production of more of them. Under favorable conditions, in grass fields with a running stream, geese will thrive and practically take care of themselves. The goose is the healthiest and heartiest of all fowls, and seldom dies from disease. The large breeds are easily fenced in, and those who have the right conditions will find they can engage in raising geese with pleasure and profit.

We know that many people never pick their geese, regarding the job as too unpleasant for both goose and picker. Yet it is very easy when you know how. To pick the geese easily and with the minimum pain, I hang it up by its feet so that its head will come to the top of a flour-barrel, placed for the feathers to fall in. One can then lock the wings and thus keep better control over the goose while picking. To lock the wings, I bring one over the other and catch the tip of the upper wing under the lower. It is not a hard trick and one can easily study out the knack of it. I aim to work as fast as possible, from the moment the goose is hung up until it is taken down.

Geese should not be fed or watered for at least twelve hours before picking. Do not pick your geese until they are ripe. Try a small bunch of feathers and if they pull readily and are free from blood, then they are ripe and ready to pluck. The feathers, when handled right, will command sixty to eighty cents per pound. Pull only the small feathers, and keep them clean as possible.

The dressing of geese is dreaded by most producers. Geese are really the hardest of all poultry to dress. Here is my easiest method for dressing geese so that they will show up bright and yellow, free from blood and splotches, and will command premium prices on the market: I hang them up by the feet and make a cut in the neck to sever the jugular vein about one and one half inches back of the head. They bleed best that way. Many people prefer to stun the bird by a blow on the head before bleeding. boiler, on the stove, with about three inches of water in the boiler. I have a rack to lay the goose on three inches above the water

As soon as the bird is dead I place it in a boiler, on the stove, with about three inches of water in the boiler. I have a rack to lay the goose on three inches above the water and keep the water boiling and the goose in the boiler from one to three minutes, depending on its age and the amount of steam. As

"It is easy when you know how"

soon as the feathers will pull easily, I hang the goose up, and as soon as it is plucked, plunge it in a barrel of cold water, leaving it for three or four hours, so as to keep it from splotching. I then hang it up until it is dry and ready to pack. In picking, leave the feathers on its head, and down the neck for about three inches, and leave all the feathers on the last two joints of the wings.

Sometimes you can handle your geese to better advantage by shipping alive. Before shipping, they should be well watered and then fed. The shipping coops should be over eighteen inches high. To fatten them for market, they should be penned from ten to fifteen days, and fed corn-meal, mixed with buttermilk, and given some kind of green food and plenty of grit. They must be kept quiet while fattening. GEORGE SIXEAS.

A Poultry Record Analyzed

IN PRINCE GEORGE'S COUNTY, Maryland, a friend of FARM AND FIRESIDE's began keeping tab on her flock of twelve Bantam hens and forty-five others of breeding not given, March 16, 1910. On September 16, 1910, her account with them stood as follows:

Credit

168 dozen eggs sold at 20c		$33.60
27½ dozen Bantam eggs sold at 15c		4.12
104 chickens on hand at 25c		26.00
35 hens on hand at 50c		17.50
12 Bantams on hand at 25c		3.00
10 chickens sold at 38c		3.80
29 chickens eaten at 25c		7.25
3 hens eaten at 50c		1.50
		$96.77

Debit

45 hens on hand March 16th, at 50c	$22.50	
12 Bantams on hand March 16th, at 25c	3.00	
Cost of feed, six months	28.30	$53.80
Net returns		$42.97

An analysis of this showing is asked for by our correspondent and an opinion as to the results obtained. Merely a part of a year's record does not furnish a really good basis for an opinion. If the birds laid but little before March, their record for the year must remain low, since the total, including 387 eggs which were used for hatching, is 2733 eggs for the fifty-seven hens, an average of only forty-eight eggs per hen for the half year. This average per hen would be raised somewhat by the fact that some of the hens died or were killed, so that only forty-seven of them finished the half year.

But even figured on the basis of the latter number, the average per hen for the six months would be only fifty-eight. These hens would hardly produce as many eggs during the following half year—the cold half. If the year's output was brought up to an average of six dozen eggs per hen the total would be the average egg production of farm hens the country over, which is a poor mark for a poultryman to keep before him. The best egg-production averages for flocks numbering one hundred or over are around one hundred and forty eggs per hen, or just about double the average farm hen production. All poultrymen aiming for better results should not rest until they get into the twelve-dozen class.

The way to get into this class is to select a strain of good blooded birds that have been bred for years for utility—not pampered and inbred for show purposes. Next study and strive to keep them vigorous and healthy, while steadily working to improve their productive capacity just as is done with dairy cattle, sheep or hogs. B. F. W. T.

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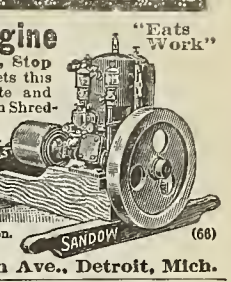

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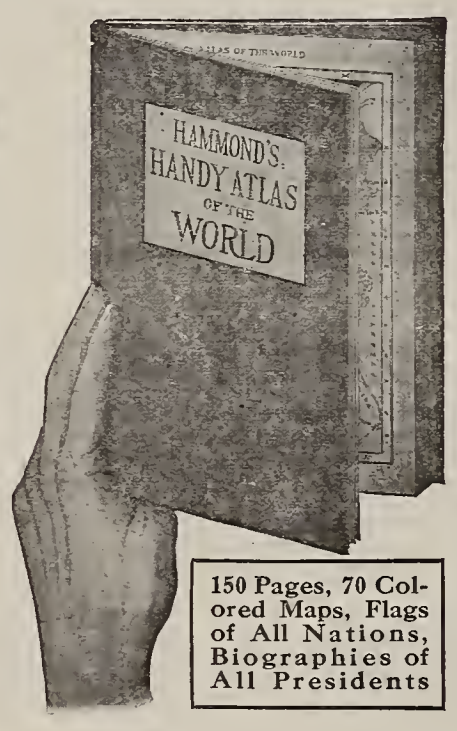

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Farm Notes

A Home Course in Agriculture

WITH the tremendous awakening of interest in the scientific side of agriculture which has been evident throughout the country in recent years, there has come a natural increase in the number of schools and colleges devoted to the teaching of farming. Unfortunately, however, the vast majority of farmers are not in a position to give up the necessary time to study at such institutions. Their only spare moments are in the evenings. It is for this latter class that the following suggestion for a course of home study in agriculture has been prepared.

It is well recognized that the most valuable study is that in which the student digs out knowledge for himself. Consequently this course is merely an outline, or a suggestion of the points which might be covered in the securing of a comprehensive knowledge of agriculture in practically all of its phases.

Such a course is, naturally, of most value to the man of limited experience in farming, or the young man anxious to enlarge on his practical knowledge. But the following outline has been shown to several mature and successful farmers, who agreed that, while their experience covered most of its points, they could still find profit in a systematic study of others. I believe, therefore, that the following suggestions will have interest to older farmers, as well as to younger ones who are now figuring out their winter's reading.

Let Uncle Sam be Your Librarian

All the outside information required in the course can be secured from the farm books found in even the smallest public libraries and in the government publications on agriculture. On request, as is probably known by every farmer, the Superintendent of Documents, Washington, D. C., will send price-lists of the publications issued by the Department of Agriculture. These include the older bulletins. New ones, just out, can be obtained free from the Secretary of Agriculture or from your congressman. Write the Chief of the Division of Publications, Department of Agriculture, and ask him to send you "The Monthly List of Publications," which contains the names of the new bulletins.

For clearness in considering the course it has been divided into five lessons. The first lesson has been designated as "The Value of the Farm," the second as "Improvement of the Farm," the third "Cultivation," the fourth "Live Stock" and the fifth "The Farmers' Year and the Farmer as an Accountant."

Lesson One—a Taking of Stock

Now for lesson No. 1. In this lesson the student should teach himself exactly what constitutes a valuable farm. Under this heading there are a number of things to be considered. First, perhaps, would come the farm's location. Is its location such as to increase or decrease its value? In this connection is the proximity to a market or a railroad of value or not? Furthermore, is its location such as to endanger its crops and live stock from floods, storms, excessive cold, etc.?

The condition of the soil is also an extremely important matter in determining the value of a farm. Is the soil worn out or good? In this connection just what constitutes good soil? How is the quality of soil determined and how determine its manurial requirements? What is "soil water" and what has the presence of large quantities of water in the soil got to do with its value in the matter of producing crops?

Finally in Lesson No. 1 the student should study the farm's equipment. Equipment is taken as meaning everything on the farm—fences, buildings, live stock, seed, etc. Are the fences in good condition? What kind of a fence is the best? How are the barns? Are they constructed according to the best principles? Is the live stock healthy? Is there enough live stock for the size of the farm or is there too much? Just what should be the proportion of live stock to a farm's size? How is the water-supply? Are the fields tiled?

Knowledge That Stays Put

It will be seen very readily that any student who digs out for himself the answers to the foregoing questions will have acquired a tremendous amount of information which will be of value to him in farm work. This information, too, will have made a bigger impression upon him and will stay with him longer than if he had merely superficially secured it from some agriculture school.

Lesson No. 2, as has already been stated, has to do with "Improvement of the Farm." It is indeed an extraordinary farm which is not capable of some improvement and just what this improvement should consist in should be learned by the student. The rotation of crops is now universally acknowledged as embodying a deep scientific principle. Just what is this principle? In the particular locality where the student is located, what particular rotation of crops should he observe? In this connection what are the best crops for him, in his locality, to grow? How should his farm be laid out so as to observe the proper order in this rotation?

What is the best location for the farm buildings? How can the lighting and cleanliness of the barns be improved? How can the water-supply be improved?

It is evident that Lesson No. 3 is largely a growth from Lesson No. 1. Many of the facts learned by the student in the first lesson, as tending to increase the value of a farm, can be put in actual application in the second lesson.

The How and the Why

Now about "Cultivation." Under this heading the various cereals should be taken up and an exhaustive study made of each, and the matter of tillage, too, should receive attention. What are the scientific reasons for plowing, harrowing, rolling, etc.? When is the proper time to plant the various grains? How can good seed be told from bad seed?

In this lesson attention should also be paid to the other cultivated products of a farm, such as the orchard, garden truck, hay, and so forth. Can orchard trees be utilized as wind-breaks? What is the value of a wind-break?

Under "Live Stock" the student should consider cattle, horses, hogs, sheep and so on. What kind of animals should he keep and why? How should they be housed, how fed, how bred, when killed? It would be an excellent thing for the student to prepare a "breeding table" giving the lengths of time each kind of animal carries its offspring. In deciding what kind of animals to keep, the question of selling value should be considered. If cattle, should they be kept for beef or dairy purposes, taking into consideration the local conditions of demand, feed and labor, etc.

A Bird's-Eye View

Finally in the last lesson the student should prepare a résumé of the year's work, month by month. What should be done in January? What in May, August, September? By making such a résumé the student will have a clearer idea of the farmers' work than through any other method.

Now, in regard to keeping accounts. This should be one of the most important phases of farm work and yet it is the one most neglected by all farmers. Of course, farmers have not time to keep the particular and detailed accounts that are possible in business houses, but it is practicable to work out a simple set of books that will show at the end of the year a very close approximation to the profit or loss in every department of the farm.

In keeping accounts, begin with the seed and the initial cost of the live stock. From this the exact tally should be kept until the money for the sale of the product is in the seller's hands. What is the cost of the labor put on any one field? What the cost of the fertilizer, and in irrigated sections, the water? What is the cost of the feed for the hogs, the sheep, the horses? What is the amount received from the sale of milk from any one cow? For the purpose of keeping really accurate accounts each field and each animal—or herd of animals—should be assigned a number or a name, and everything pertaining to that field or that animal should be conscientiously and properly entered.

It is believed that the student who acquires all the information suggested in the foregoing course will have a fund of knowledge which will materially aid him in making more money from his farm when he puts his knowledge into actual practice.

FRANK H. WILLIAMS.

Where Corn-Cob Pipes Come From

ONE of Missouri's distinctive industries is the manufacture of corn-cob pipes. Particularly good cobs are grown in the rich valley lands of the Missouri River from the St. Charles white variety which has a large, compact, white cob suitable for the turning lathe and for a high polish. The pipes are sold direct to large dealers in this and foreign countries. Many of them are highly finished and ornamented.

Over three hundred and fifty people are employed in pipe-making in Missouri. The industry, however, does not offer very good possibilities in other states, especially on a domestic scale, as the machinery is expensive.

W. M. K.

A Feast of Good-Will

By John Pickering Ross

THE letter published below is not only seasonable, and notable for its spirit of Christmas good cheer, but it contains a very sound lesson for American farmers. Not that it would be possible or desirable to duplicate the festival described, under American conditions. Relations between employer and employed which are natural and normal in England are impossible for us, with our traditions of equality and personal independence. The nub of the story is, we believe, that these English farmers and laborers, under economic conditions much more stringent than the average American farmer knows, contrived to have more fun out of life than the American farmer has. We seem to have lost the knack that even our own grandfathers possessed, back in the older-settled states, of getting together by neighborhoods for jollification.

But let Mr. Ross tell us how it was managed in rural England of fifty years ago:

FARM AND FIRESIDE of October 10th contained a prose-poem by the editor which charmed and carried along with him its readers while he explained the origin and meaning of the ancient festival of Harvest Home. The reading of that set me to looking backward—not always a very cheerful or profitable exercise—on the manner in which, some fifty years ago, Christmas, the greatest festival of the English people, used to be celebrated in the rural districts, where it often exceeded in importance that even of Harvest Home. I have thought that the present approach of the holiday season might awaken a special interest in the way in which the Christmas festival was observed in that one of the midland counties which was the home of the ancestors of George Washington.

Though class distinctions have always been more marked over there than with us, yet I think that a much warmer feeling of mutual good-will between employer and employed exists, at least in the rural communities of England, than is to be found anywhere among our people. This probably arises from the fact of the much larger amount of labor used on their farms, and because it is no uncommon thing to find shepherds and laborers working on the same estates and for the same families that their ancestors for many generations have served in the like capacities. This interdependence and consequent feeling of mutual interest has become ingrained, and no doubt has lent an added value to the opportunity that Christmas offers for a festive meeting between "master and man," where the absurd and unchristian trammels of caste can be forgotten.

CHRISTMAS Eve and Christmas Day have for hundreds of years in England been devoted to family gatherings—church in the morning and the rest of the day devoted to feasting. Therefore, so as not to break into the time devoted to these immemorial rites, the lords, the squires and the farmers used to set apart some one night between Christmas and New Year's in which to entertain their laborers and dependents. I will try, as far as the lapse of over fifty years will permit, to tell how this was carried through in the family with which I was, naturally, most familiar.

The farm, of three hundred acres, was two miles from the village where the majority of its laborers lived, the only exceptions being the four aristocrats of the rural world, the farm bailiff or manager, the shepherd, the wagoner and the cattleman who had cottages on the homestead. Beside these four, ten men were employed all the year around, a dozen women and children the greater part of that time, and at hay-time and harvest a variable number; and since every one who had worked even one day in the year was held entitled to an invitation, sixty to seventy guests might always be reckoned on, every member of a family down to fourteen years of age being included. And, since roads were apt to be muddy and nights dark, it took all the three big farm wagons and a lot of Scotch carts, eight big Clydesdales, the family horses and the shepherd's big donkey to bring this crowd up to the barn doors by seven o'clock in the evening. I have even known the ancient winner of many steeplechases, retired on his laurels, to be hitched up, as a last resort, to the dog-cart to bring up the parson, his clerk and the village sexton and fiddler, most important ex-officio guests, to the feast.

If you will bear in mind that the great majority of these hard-working guests rarely tasted fresh meat more than once a week, being contented the rest of the time with huge slices of fat bacon between two still bigger slices of bread, eaten at noon under a shady hedge or big tree, and that some of the more thoughtful of them deliberately starved themselves two or three days that they might do full justice to the good things awaiting them, you will be able to imagine the hustle of all hands in the big farm-house kitchen. Immense plum-puddings had been boiling day and night, dozens on dozens of big mince-pies had to be prepared for the ovens, stupendous sirloins and rounds of beef, legs of mutton and loins of pork to be roasted or boiled.

THE great barn, some centuries old, a hundred by forty feet in extent, with a roof as high as many a church transept, had been emptied, swept and garnished and decorated with holly and mistletoe, the lovely red and white berries of which would shine with the light of scores of wax-candles, Mr. Rockefeller having, mercifully, been as yet detained from blessing the world with smelly oil. Two long tables of planks resting on trestles and covered with snowy damask ran half the length of the barn, while the other half, floored with ancient oak, worn smooth by time and the beatings of many flails, was left for the dancing and the games of the women and children which followed the supper.

Punctually on time the great convoy delivered the loads of fathers, mothers and children at the great barn doors, where they were met and welcomed by members of the family and marshaled to their seats—benches borrowed from the school-house. This seating was quite a ceremony because age and rank had to be accorded its proper recognition, for precedence reigned among these villagers as strictly as among the courtiers of the queen.

How a Comfortable English Farm-House Looks at Christmas-Time

Then there entered the cook's procession, led by the village fiddler playing with intense solemnity "The Roast Beef of Old England." After him came the rosy and stalwart head of the kitchen staggering under the weight of Sir Loin which she deposited with much stately flourish before the master. She was followed by her helpers who each bore a dish to be deposited before certain men and women of established reputation as carvers. All rose while the vicar offered up a short but fervent "grace." Seats were then resumed, the carvers got busy, the ladies and domestics of the family acting as waiters, and the battle of knives and forks was on. And truly it was a battle, individual deeds in which nothing short of the pen of a Homer is worthy to describe. All I dare attempt is to relate that the immense first course disappeared with incredible speed, yet the short space of time allowed for clearing it away seemed sufficient to enable

[CONCLUDED ON PAGE 16]

A Houseful of Winter

ICE is a great luxury in the summer time, and in cases of sickness it is a necessity. Every northern farmer should lay plans in the fall to lay up ice, if he is near any pure water supply.

The keeping of ice does not depend on the expensiveness of the building or even the manner of construction. Almost any place that will hold sawdust and keep out the rain, if well drained, will keep ice. Many expensive ice houses are failures because of lack of ventilation. There must be a free circulation of air over the top of the sawdust to take up the moisture. Better to saw holes in the gable ends of the building and let through a draft of air than to keep in the moisture and ruin the ice.

For years we used with success an ice-house built of logs taken from an old house, put up just as they were before being torn down. The cracks were chinked and a ridge roof put over them, leaving the gable ends open. The floor was rounded up with gravel so as to make a good drainage. Then an inner wall was built, one foot inside the outer wall, and the space was filled with sawdust packed in well. The ice was always placed into the house very evenly, not thrown in promiscuously. As soon as the house was filled a covering of sawdust was thrown over and packed well around the sides and into the corners. We never threw water over the ice with the purpose of having the blocks freeze together solidly as we wanted the cakes separate.

W. D. NEALE.

Why Nitrates on Legumes?

I READ in a leading agricultural journal the following recommendation of fertilizer for cow-peas: "On land of ordinary fertility a very good crop of cow-peas in corn or after wheat can be insured by sowing broadcast about three hundred pounds of acid phosphate or more, and at least two hundred pounds of muriate of potash to the acre, and one hundred and fifty pounds of nitrate of soda may be drilled in the row at the time of planting. The nitrate of soda will furnish an abundance of nitrogen to give a vigorous start to the plants, such as will make them valuable later when the leaves begin their work of absorption of nitrogen from the air."

This advice looks good at first sight, but when the cost of such an application of fertilizer and sowing of peas is considered it somewhat changes the proposition. We estimate the cost, at reasonable rates, for one acre, to be as follows:

300 pounds of acid phosphate	$ 2.40
200 pounds sulphate of potash	4.80
150 pounds nitrate of soda	3.75
Total for fertilizer for one acre	$10.95

Then if we add the value of one bushel of cow-peas, at $3.00 per bushel, we have $13.95 money cost of seeding one acre of cow-peas, not considering labor cost. Would this prove profitable on the average farm?

Then another thought presents itself. Is it profitable to apply nitrogen at all to a leguminous crop on a fairly good soil? Once I sowed cow-peas on a good soil which I believed to contain plenty of nitrogen. The crop grew well, but not a single nodule appeared on the roots of the cow-peas, leading me to believe that the peas used the nitrogen of the soil for their growth rather than that they could have obtained it from the air. There have always been plenty of nodules on cow-pea roots on my farm on land not so rich in nitrogen. It seems to me that applying nitrate of soda is a waste of material.

The writer quoted says that the cow-pea "leaves" absorb nitrogen from the air, which is, of course, a misstatement, since it is just about settled that all leguminous crops get their nitrogen from the air by means of certain bacteria which develop on, or in, the roots of the plants and form nodules.

I believe in cultivating leguminous crops, but they may cost too much to be profitable if we do not use good judgment in selecting a crop suited to the soil and climate, or if we do not use good judgment in selecting fertilizers.

A. J. LEGG.

Tool-Hooks of Nature's Make

SPADES, shovels, rakes and other articles that constitute the minor portion of the farming kit should be hung up, to save floor space. A cheap and good hook for this purpose may be made as follows:

Find a strong crotch of a tree, so shaped that the main trunk or branch goes straight up and the smaller limb juts out from it, so that there is a moderately acute angle left between them. Saw the smaller limb off a foot or so long. Then saw the main trunk or branch off about six inches below the jutting limb and a foot or more above. Flatten the side of the main branch opposite to the jutting limb, and nail it up against the wall.

Two such hooks with rather open angles, placed a few inches apart, make an admirable rest for several spades, shovels, etc., at the same time. In the stable they serve as harness-hooks. If an outbuilding is near to the garden, several hooks attached close up under the shelter of the eaves will serve as a temporary storage place for garden tools.

P. C. GROSE.

Agricultural News-Notes

Heavy shipments of celery from California to the East were begun November 15th. The season's output will amount to nearly two thousand five hundred car-loads.

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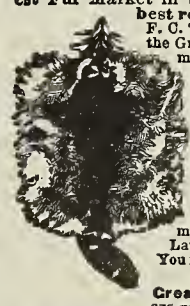

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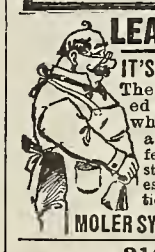

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WE want to send you this beautiful Oxford Silver Sugar-Shell, made by Rogers Company. It is made of heavy plate silver. Entire spoon is six inches long, handle is four inches long, beautifully carved and embossed in the Narcissus pattern and finished in the popular gray French style. The bowl is two inches long and one and one half inches wide, having a beautifully carved and deeply embossed Narcissus in the bottom. It is finished in highly polished silver plate. We guarantee this spoon to be genuine Oxford Silver Plate. If you are not perfectly satisfied, you can return the spoon and we will refund your money. We want to send it to you without cost, just to show you how you can earn a set of six Oxford Silver Teaspoons just like it without a cent of outlay on your part.

Send Only Twelve Cents

and one three-month subscription to FARM AND FIRESIDE and we will mail you, free of charge, a genuine Oxford Sugar-Shell, as described above. The Sugar-Shell will be yours to keep, all we ask is that you agree to show it to two of your friends.

Address all orders to

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Prof. Beery, King of Horse Tamers and Trainers, has retired from the Arena and will teach his wonderful system to a limited number, by mail.

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Prof. Jesse Beery is acknowledged to be the world's master horseman. His exhibitions of taming man-killing horses, and conquering horses of all dispositions have thrilled vast audiences everywhere.

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Write and Prof. Beery will send you full particulars and handsome book about horses—FREE. Also big *free circular* of Beery Exhibition. Address (11)

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Also Conductors. We fit you at home in your spare time for the good paying profession of Electric Motorman or Conductor. The work is steady the year round, and the wages high.

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waiting for our graduates. This school is endorsed by Electric Railway Managers all over the country. If you want a good paying position, write today for new Free Catalog and full information. Official Ry. School, Gen'l Office 404, Freeport, Ill.

Farm Notes

Valuable Agricultural Books of the Year

THE standard text and reference book of bee-keepers, THE ABC AND XYZ OF BEE CULTURE, is issued in a new edition forty pages larger than the last (1908) edition, with many illuminating new illustrations and several new sections. Other sections have been revised to bring them abreast with the newest developments in apiculture. Pages, 576; price, $1.50; the A. I. Root Co., Medina, Ohio.

AGRICULTURAL BACTERIOLOGY, by Russell & Hastings, is largely a collection of lectures used in the Farmers' Short Courses of the University of Wisconsin, and therefore its style and matter have had the acid test of delivery to farmers. It treats of bacteria in general, in relation to milk and other dairy products, in relation to the diseases of hogs, fowls and miscellaneous diseases. There are six chapters on the relation of bacteria to soils, and one each on preservation of foods and diseases of plants. Pages, 238; published by H. L. Russell, Madison, Wisconsin.

DOMESTICATED ANIMALS AND PLANTS, by Dean Eugene Davenport of Illinois Agricultural College, gives an exceptionally plain and understandable statement of the laws of heredity and their application in animal and plant breeding, in accordance with the latest positive knowledge on this subject. The last five chapters account for the origin of all our principal domesticated animals and plants. Pages, 321; price, $1.25; Ginn & Company, Boston, Massachusetts.

FANCY CHEESE IN AMERICA, by Charles A. Publow, is a thoroughly useful manual, which treats the general principles of fancy cheese-making briefly, and the working details very fully and understandably. Pages, 96; price, $1.00; American Sheep Breeder Company, Chicago, Illinois.

FARM BY-PRODUCTS is the first and only hand-book ever compiled which covers fully all practical side-lines of farm profit. It tells how to develop new and unsuspected sources of income, and how to manage old and well-known side-lines to make them pay greatly increased returns. Pages, 96. Compiled by the editors of FARM AND FIRESIDE and to be had only with new or renewed subscriptions. Postage prepaid. If your subscription has not expired, the renewal will date from the end of your present subscription. Order early, as edition is limited.

THE AMERICAN FLOWER-GARDEN is the title of a large, beautifully illustrated and charmingly written work issued by Doubleday, Page & Co., Garden City, New York. It is a center-table book in appearance, and the flower-lover, garden planner and landscape gardener will find it full of practical hints. Pages, 368; price, $5.00.

The same publishers have issued a revised pocket edition of their FLOWER GUIDE, which, by descriptions and naturally colored plates, enables the reader to identify wild flowers native east of the Rockies. Pages, 232; price, 75 cents.

HOW TO KEEP HENS FOR PROFIT, by C. A. Valentine, is a discussion of the business by one who has been through the mill. "Handling the Chicks," "Modern Ways of Housing," "Expensive Accidents" are chapter headings that indicate the nature of the book. Pages, 298; price, $1.50; The MacMillan Company, 66 Fifth Avenue, New York City.

A MANUAL OF PRACTICAL FARMING, by John McLennan, contains a store of useful facts on crop growing, tillage and the breeds and feeding of animals. Pages, 298; price, $1.50; The MacMillan Company.

ORNAMENTAL CONCRETE WITHOUT MOLDS, by A. A. Houghton, gives methods for finishing decorative details, arches, columns, monuments, etc. Pages, 132; price, $2.00; The Norman W. Henley Company, 132 Nassau Street, New York City.

POULTRY BREEDING, by Miller Purvis, is an accurate and up-to-date manual of poultry-keeping, the subjects arranged alphabetically, which makes the work handy for reference. Illustrated. Pages, 323; price, $1.50; The Breeder's Gazette, 358 Dearborn Street, Chicago, Illinois.

SWINE, by William Dietrich of Illinois Agricultural College, sets a new mark in the treatment of the subject. It is, in parts, technical, but at no time beyond the grasp of the average reader. Mr. Dietrich has developed his system of management farther than any previously worked out, along the line of economy of feed coupled with the production of rapid gains. Illustrated. Pages, 300; price, $1.50; The Breeder's Gazette.

To Clear a Stopped Pipe

IT OFTEN happens that a pipe gets stopped up and we are led to think that it is frozen or that it is leaking badly. I know of cases where the whole line has been uncovered in order to get at a stoppage. A remedy that will save much time and trouble is to attach a common pitcher suction pump at one end of the line, and nine times out of ten the pump, with the pressure behind the obstruction, will bring it out. That method beats digging up the pipe line. C. A. WAUGH.

Good Logic

IF PEOPLE that are not satisfied with their old farms would do one half of the work they would have to put on a new farm, improving and repairing their present one, and if, also, they would spend the money that is used in looking for a better place on improvements on the old, they would often have their old place in better condition than they could get the new one into, for years to come. Besides that they would stay among their friends, would not have to undergo the trouble of moving and selling implements below cost, only to buy new ones later on. They know how and what to plant at home, while in a new country sometimes very unprofitable experience must be gone through before the man who has moved becomes used to the new conditions of soil and climate.

ANTON T. PFEIL.

A Feast of Good-Will

[CONTINUED FROM PAGE 15]

the guests to forget that they had had anything to eat.

But the tables were at length cleared of the last course of corpulent plum-puddings, the vicar returned a grace of thanks and oranges, raisins, nuts and the like were placed before the women and children; long clay pipes (known as church-wardens), tobacco and mugs of foaming home-brewed ale before the men; and the toasts, restricted to four in number, were in order.

The first of these was always to the health of the much beloved Queen Victoria, proposed by the master, drank standing, and followed by a verse or two of the national anthem of "God Save Our Gracious Queen." Next in order came what was regarded as the great event of the evening, I suppose because it always caused the greatest noise, the health of the master. This was proposed by the vicar. As he sat down pandemonium was let loose. The guests yelled, they cheered, they mounted the benches and frantically waved their arms. And then followed a stentorian chorus by every voice in the barn "For he's a jolly good fellow . . . and so say all of us," until the victim, who had sat quietly through it all, got on his legs, spoke a few words of thanks, and it is to be hoped felt pretty unworthy of so much enthusiasm.

Next in order was the health of the mistress, proposed by the parish clerk. Then the master proposed the health of the vicar, whose speech in returning thanks was really the feature of the evening, so full was it of good fellowship and good advice for all.

The young men and maidens, the women and children, then left the tables, and started up gossip, games and dancing at the end of the barn prepared for that purpose, under the auspices of the ladies of the family and a few invited neighbors, and to the music of the village fiddler, harpist and cornet-player, while the vicar and the master retired to leave the men to their own devices, upon which but one restriction was placed. The old October ale was a potent tipple, and to prevent accidents it was placed under the care of the gardener, an ancient Scot of temperate principles and unbendable will, who served to every man so much, and no more than was good for him.

Then the men settled down to their pipes and their ale, their stories, jokes and songs, for there were many good singers among them, whose taste ran mostly to ancient ballads and more modern sentimental songs, though there were really clever comic singers as well.

I think every English village had, in my day, at least one eccentric character; ours was old Phineas Grover, who, though close on eighty years, was still able to do a good day's work in overseeing the women and children at their weeding and hoeing. The peculiarity he always displayed at the feast was to get into a corner of the barn with his mug of ale, and sing without ceasing a seemingly endless chanty, quite regardless of all that was going on around him. The first verse has always remained in my memory:

Billy Taylor was a fine young sailor,
Full of mirth and full of glee;
And his heart he did discover
To a maiden fair and free.

Another oddity was a boy of about sixteen, who had won a prize in his class at a plowing match, and wore his blue ribbon with great pride on the breast of his white smock frock. His mania—for it was one—was to get away by himself and sing another apparently endless song, the refrain after each verse of which was

. . . for 'tis my only joy
To plow and to sow
And to reap and to mow
And to be a farmer's b'hoy—hoy—hoy,
To be a farmer's boy!

At a quarter before twelve o'clock the vicar returned, spoke a few pleasant words of farewell to the quieted assembly, then gave out and led the good old Doxology,

Praise God from whom all blessings flow,
Praise Him ye people here below . . .

And after hearty good-nights the people were packed up in the wagons and carts lined with sweet straw; and, I think, the foundations had been laid for another year of friendly relationship between master and man.

This Calendar Without Cost

If You Order Before Christmas

These Christmas offers will be withdrawn on Dec. 25th. Write your order on the blank opposite or on a blank piece of paper and mail to Farm and Fireside to-day.

A Gift to Subscribers

FARM AND FIRESIDE will present this beautiful 1911 Calendar to every reader who sends a subscription before Christmas. It is the most beautiful Calendar FARM AND FIRESIDE has ever made for its readers, the most expensive, too; and it is by far the handsomest Calendar for 1911.

The 1911 Beauty Calendar will make the most showy and handsome picture you ever saw when hung on the wall of your living-room. It is two-and-a-half feet in length, printed on the finest heavy paper, brass bound at top and bottom so it won't tear or roll, with a patent hanger, all ready to hang up. **And it is printed in twelve different colors.** The page that you are now reading has been printed once, in black. Imagine how beautiful the small reproduction of the Calendar here shown would be if it were printed twelve times, each time in a different color. The actual Calendar which we will send you is thirty inches long—nearly three times as long as this small copy.

The Handsomest Calendar for 1911

It has cost us a great deal to make the 1911 Beauty Calendar. We wanted FARM AND FIRESIDE readers to have the handsomest and best calendar of the year, and we have made it for you at great expense. You can get it—without cost—if you ask for it right away. Only one hundred thousand of these Beauty Calendars have been printed. Therefore, only one hundred thousand out of all the subscribers of FARM AND FIRESIDE can get it—only about one subscriber out of every five. You should hurry to get your Calendar, therefore. **We guarantee that you will get a Calendar if you send your subscription before December 25th.**

The Three Most Beautiful Pictures

We started to make your 1911 Calendar almost a year ago. We decided that, to make it more beautiful and more interesting than any other calendar this year, we would show the pictures of three girls, instead of one, and that these would be the loveliest girls' heads painted in recent years. Months were spent in searching for them, and here they are—three beautiful, healthy, American girls—the handsomest girl pictures in years.

Hang It in the Living-Room

After we got the pictures, months have been spent in making the Calendar itself. The Calendar for every month has been drawn by hand by an artist. The paper on which the Calendar is printed is the best of glazed picture paper, the kind expensive pictures are printed on when bought in stores. And as we said before, the Calendar has been printed twelve different times, each time in a different color. **The result is a gorgeous display of color that will brighten and cheer every home.**

Hang it in the living-room, where every one can see and admire it. It is the prettiest Calendar of the year and you will be proud of it. **To get the Calendar without cost send your subscription by December 25th.**

The Best Farm Paper

OF course you are going to renew your subscription to FARM AND FIRESIDE. You will get the very best articles obtainable on the growing of crops, farm notes, dairying, poultry, and all branches of farm work. You will obtain FARM AND FIRESIDE'S famous department "The Headwork Shop," every issue of which contains several new wrinkles for improvements about the farm buildings, FARM AND FIRESIDE'S great new exposition on marketing farm products. In addition, every number of FARM AND FIRESIDE will contain many pages for the women folks and children.

How to Get the Calendar

We guarantee to send a copy of FARM AND FIRESIDE'S 1911 Beauty Calendar, absolutely without cost with every subscription to FARM AND FIRESIDE that is mailed before December 25th. The Calendar will be sent carefully packed in a tube, postage prepaid, **and we guarantee it will reach you in perfect condition.**

Christmas Offer No. 1

Send 50c. for a one-year subscription to FARM AND FIRESIDE—24 numbers—and you will receive the 1911 Beauty Calendar at once, without cost, postage prepaid.

Christmas Offer No. 2

Send $1.00 for a three-year subscription to FARM AND FIRESIDE (to one address) 72 numbers, and you will receive the 1911 Beauty Calendar at once, without cost, postage prepaid. You will also receive without cost a box of 50 beautiful Christmas post-cards, all different. The post-cards are described on Page 30.

Christmas Offer No. 3

Your Subscription Without Cost

Get two friends each to hand you 50 cents for a one-year subscription to FARM AND FIRESIDE and send us $1.00 for the subscriptions. In return we will send you FARM AND FIRESIDE for one year without cost. We will also send you a box of 50 Christmas Post-Cards post-paid. A 1911 Beauty Calendar will be sent to you, and to each of your two friends.

Farm and Fireside for a Christmas Present

A year's subscription to FARM AND FIRESIDE, together with the 1911 Beauty Calendar, will make the finest Christmas present in the world. By accepting Offer No. 3 you will obtain your own subscription for a year and the Calendar, together with a year's subscription and Calendar for each of two friends, all for $1.00; and in addition, you will receive a box of 50 beautiful Christmas post-cards.

An Announcement Card

If you give a year's subscription to FARM AND FIRESIDE to one or more friends, we will send to each friend on Christmas Day, if you so request, a handsome **Announcement Card** stating that FARM AND FIRESIDE will be sent for a full year, 24 numbers, and that the gift is from you. The announcement card is a handsome, heavy card, printed in many colors. If you prefer, we will send the announcement cards to you, in envelopes, and you can send them yourself. But we will be glad to send them to your friends, putting your name on each card as the giver of the subscription, and paying the postage.

Cut Along This Line

Dec. 10
F. and F.

I accept your Offer No....., for which find inclosed $.....
Send FARM AND FIRESIDE and the 1911 Beauty Calendar to each of the following addresses:

Name.....
Address.....
Name.....
Address.....
Name.....
Address.....

If you accept Offer No. 2, or Offer No. 3, you will receive a box of 50 Beautiful Christmas Cards, in addition, without cost.

Farm and Fireside, Springfield, Ohio

This Calendar Offer Expires on December 25th

SUBSCRIPTION PRICE

One Year (24 numbers) . . . . 50 cents
Canadian Subscriptions . 1 Year, 75 cents

Entered at the Post-Office at Springfield, Ohio, as Second-Class Mail Matter.

Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should he marked "Editor."

The date on the address label shows the time to which each subscriber has paid.

Subscribers receive this paper twice a month, which is twice as often as most other National farm journals are issued.

Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelope.

When renewing your subscription, please say it is a renewal, and if possible send the label from a recent copy. If all our subscribers will do this a great deal of trouble will be avoided.

FARM AND FIRESIDE

PUBLISHED BY
THE CROWELL PUBLISHING COMPANY
SPRINGFIELD, OHIO
Branch Offices: 11 East 24th Street, New York City
Tribune Building, Chicago, Illinois
Copyright, 1910, by The Crowell Publishing Company

ABOUT ADVERTISING

Farm and Fireside does not print advertisements generally known as "readers" in its editorial or news columns.

Mention Farm and Fireside when you write to our advertisers, and we guarantee you fair and square treatment.

Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser in this paper should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

Farm and Fireside is published on the 10th and 25th of each month. Copy for advertisements should he received twenty-five days in advance of publication date. $2.00 per agate line for both editions; $1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2¼ inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

Letters regarding advertising should be sent to the New York address.

A New Year's Introduction

As a bit of friendliness to Farm and Fireside don't you want to introduce us to some of your friends and neighbors? All Farm and Fireside folks have friends and neighbors who would like our paper. You can obtain a special introductory three-month subscription to Farm and Fireside for any friend for ten cents. Your friend will appreciate this neighborly interest, and Farm and Fireside will be grateful for the introduction. This proposition will hold good until January 10, 1911.

* * *

Some men are so lazy that if it required any energy to push tobacco-smoke into the air they would quit the habit.

With no field-work to divide his attention during the winter, the farmer ought to make the dairy and poultry business hum—and his otherwise valueless time is all it will cost him.

Better to be the least among the pushers-up than the biggest among the pullers-down.

The man who is set in his way doesn't hatch out much that is worth while.

The waste on many a big farm would buy a little farm, and often causes the sale of the big one.

Money put into a life insurance policy which ought to be used in enhancing the productivity of the farm is not wisely invested.

In all the cotton states where there is an abnormal amount of erosion, especially on the southern slopes, attention can not be called too often to the advantages of putting on a good coat of rye or hairy vetch or both where the soil is apt to wash badly.

Some people seem to think that we are in too big a hurry. We run to catch a car, shoot up and down in elevators, fly through the country in automobiles. But even at this man is slow when compared with the way God moves things. This earth flies through space faster than ten miles a second. Some of the stars are known to exceed a hundred miles a second. A thousand years are to Him but a day. That is the way God moves. So man can hustle a little more and still be slow.

Congress and the Parcels Post

A discredited Congress is meeting, and the parcels post will, in all probability, receive no more attention than it has had in the past. That is, it will get more kicks than halfpence. Our post-office department seems unaware of the shame of the fact that it carries an eleven-pound parcel to almost any foreign country in the world, but refused to take anything heavier than a four-pound package from the hardware or grocery store to the man on the R. F. D., though it has a mail-carrier going out to the farm almost empty-handed.

This is splendid management, truly! And Mr. Hitchcock's wonderfully efficient department seems quite unaware of the disgrace which sticks out of the fact that it will carry an eleven-pound package half-way around the world—to Hong-Kong, Melbourne or Constantinople—for $1.32 by railway, steamship, caravan or dog-train, but will charge Farmer Smith $3.36 for allowing the rural mail-carrier to put it into his wagon and carry it to the city on the trip he has to make anyhow! If Mr. Hitchcock had his salary paid by the express companies and handled their business in a similarly inefficient way, he would be fired by wire. He would be given no chance to resign. He would not be given a recommendation or certificate of good character. The excellent business men of the express companies would never be guilty of imposing on any other employer an employee who had served them so badly.

As it is, Mr. Hitchcock stands very well with the express companies. He seems to them a safe, sane and conservative cabinet minister. They look at it from a very different point of view from that of Farmer Smith on R. F. D., No. 1. The holidays are here, and business with the express companies will be good. For days their wagons will be piled high with Christmas presents in addition to the ordinary business of the nation. They will in these days make a good part of their dividends which with some companies run above two hundred per cent. of the value of their properties. "At Christmas laugh and make good cheer, for Christmas comes but once a year"—if it came twice, the express companies, which think so well of our brilliant postmaster-general, would pay still higher dividends.

But the Post-Office Department does not pay a dividend. No—it has a deficit. And the rural mail-wagons go half empty even during the holidays, while the express wagons are piled so high that the driver has to have an assistant to look after the rear end of the load. The dividends go where the business goes, of course.

Farmer Smith's friends would like to send him presents—but to do so costs sixteen cents a pound. Farmer Smith would like to send off presents; but to do so costs sixteen cents a pound—unless his friends happen to be in Ireland or Siberia or Australia. In which case he can give the goods to the mail-carrier, knowing that they will be delivered in eleven-pound packages at twelve cents a pound. If he has over four pounds, he can not send it at all in this country—unless he splits it up. And the express wagons do not visit Farmer Smith.

But then, of course, he can always hitch up and go to town. He can put in a day's work and pay an express company for doing the work that in civilized nations generally is done by the post-office. But those nations lack two blessings which we possess—our express companies and our postmaster-general.

A Mutual Help

We have established, on Page 2, an index to the advertisements in this issue of Farm and Fireside. We believe this index will be a real help to you in finding what you want. It will be continued in future issues.

Every one of these advertisements has Farm and Fireside's guarantee back of it, and we want every member of our big family of subscribers to feel that the advertising columns are just as available for use as are the reading columns.

The Schools Consolidate

A bulletin of the Department of Agriculture makes the statement that "consolidated rural schools promise to supplant the scattered one and two room schools over a large part of the United States, and to change the present trend, methods and results of rural education. The rate of progress of school consolidation during the past five years, if sustained during the next few decades, should see a well-coördinated rural school system nearing its completion. The movement has grown quietly, and few are aware of its extent. In fact, many educators have not yet grasped the full significance of rural school consolidation."

There are now nearly two thousand consolidated rural schools in the United States. Counting nine one-room schools merged in each of these, we have eighteen thousand old-fashioned school-houses abandoned for the new-fashioned and better-fashioned ones.

The Spokane, Washington, Board of Trade supports a Country Life Commission of its own, which is working with the Country Life Commissions of Idaho, Washington and Oregon in devising improvements in the rural facilities for living a pleasant and full and profitable existence. Its scheme involves a Country Life Hall in every neighborhood, where civic and social work may be carried on. The consolidated rural school offers the best start for a Country Life Hall imaginable. It must have professional teachers, and it may well maintain a teachers' house and field and garden, as churches maintain parsonages. Such school centers make for permanent and influential teaching forces, and they in turn promote the growth of educational and social activities closely linked with farm life. Are you willing to wait "the next few decades" for yours?

Who Needs the Automobile?

If the invention of the motor-car does not bring greater benefits to the farmer than any one else, it will be a case of an invention gone wrong. Of all men, the farmer needs the automobile most. The city man has paved streets, short distances and street cars—and had them long before the motor-car came into vogue. For him it is a means of renewing his touch with the country and of using the boulevards and parkways for pleasure. But the farmer needs the motor-car, whether he thinks so or not. He needs it for his tired and lonely wife. He needs some way of going over country roads at such speeds that a journey of fifty miles doesn't mean a day lost. He needs to be able to slip into town and back while the men rest at noon. He needs a method of getting into touch with every other farm within a radius of a hundred miles. He needs a means of having a chat with the man in the next county, after the chores are done at night.

Of all men he most needs to annihilate distance; for he has most of it between him and the intercourse and the contact he needs, and which will pay him in pleasure and profits. The farmer who can not get pay in money for the gasolene and rubber expended in a day's travel to the farms of other men, is a poor farmer. He needs a surgical operation on the shell about his mind. All these benefits the automobile gives to the farmer in greater measure than to any other man.

The whole question is one of expense, and that is a question which every farm must thrash out for itself.

* * *

One essential to a sane and evergreen optimism is the faculty to see through the many illusions of other optimists.

Map out a plan of intelligent farming and then adhere closely to that plan, year in and year out—unless your neighbor has what proves to be a more successful plan, in which case, follow his methods.

Will the farmers never wake up to the fact that city-bred teachers and text-books written by town residents can not imbue their children with much love for agricultural pursuits and a happy home in the country?

One great reason why some men win on the farm is because they keep the ends tucked in. If you want to freeze on a cold winter night, let the bed-clothes get pulled out at the foot. Farming is just that way. Don't let the bed-clothes get pulled out at the foot.

Time to Pip the Shell

All through the summer, ten chances to one, you have been cut off from your fellows and become incrusted in a shell of offishness and seclusion. This is the time to pip this shell. The farmers' institutes are meeting in the winter. Every man who farms should attend. Your state agricultural college is offering a short course of some kind—can't you go? You have heard about cow-testing associations, but they have seemed away off from your own life. Get in touch with your fellow-dairymen and see what they think of it. Are you a breeder of fine stock? Why not talk up the forming of a coöperative breeders' association, all to breed the same breed, and help make the neighborhood a market for them, so as to attract buyers? Join the Grange, the Farmers' Union, the Society of Equity, the nearest farmers' club—and get into the debates and discussions with your ears if not with your tongue. How about a consolidated rural school in your neighborhood? Possibly your force is all that is lacking for this. Do you know all about seed-corn testing, tile draining, clover and alfalfa growing, road improvement and the like? Then get together with the rest of us poor benighted fellows who don't and tell us about these things. If you don't know all about them, get together and start the discussion. It's winter, now, and the chance of brain cultivation this year is passing away. Read the farm press; but don't stop at that. Start something! Pip the shell! An unhatched chicken or man is a mournful spectacle. Don't be one!

The FARMERS' LOBBY.

By Judson C. Welliver

BANG!
Bang, bang!
Bang, bang, bang!

The still night air resounded to the crackling crash of what seemed a volley of musketry, and 93,763,931,017,872 boll-weevils bit the dust.

You see, I wound up the last chapter as a penny dreadful with the hero being hung, the heroine trembling on the edge of the precipice and the boss villain strutting down to the center of the stage, twisting his dark mustache with one hand and toying a long, low, rakish, Joe-Cannonesque cigar in the other.

We were telling how Dr. Sanford A. Knapp organized his great system of experiment farms all over the South, and how they have been improving the conditions of Southern agriculture through emancipating the farmer from his dependence on cotton, inducing him to rotate crops, to make his farm produce his living as a sort of side-line and to fight the boll-weevil with scientific methods. Having pulled off a gun-fight, saved the hero, rescued the heroine and put the villain to the fritz, as we promised at the end of the last chapter, we will now proceed seriously to contemplate Doctor Knapp's experiment farms and try to forget that we ever descended to the ignominy of dime-novel technic as a means to pull over a double-deck story.

The Southern planter had been raising cotton almost to the exclusion of anything else until it had become a tradition. It had been bad for the soil and worse for the planter. The ordinary condition of the man of small means was that he mortgaged his crop and about everything else he had, to support his family while he was producing his year's cotton crop. When the crop was made and sold, he paid off the store bill and started in anew on the same treadmill round.

An Agricultural Revolutionist

DOCTOR KNAPP told the farmers to raise corn, clover, stock, poultry, butter; to organize their affairs so that, by living more and more off their own land, they would need less money and thus be less dependent on cotton. In this way, too, they would make their stock and their rotation of crops maintain their soil with less expenditure for fertilizers. He showed them that meat was very expensive at the South because there was not enough of it raised. The Southern cities afforded a splendid market, close at hand, for meats they should raise and there was every reason to believe that this market would be better and better from year to year. In short, he demanded of the Southern people that they revolutionize their whole method of agriculture. With a population that almost knew nothing but cotton, and with labor such as the South must employ, it was necessarily a proposal about as radical as could well be imagined.

The demonstration farm became the first step toward carrying the revolution to the people. Its purpose was to make the people learn for themselves, rather than to teach them; to induce them to do things, rather than to listen to lectures about doing them. First, in every county it was sought to induce men to offer their own farms for demonstration places. The government's part was merely to provide advice, direction, generalship. Special expert agents were assigned to each territory, to go about among the demonstration farms, telling how to do things. The point of excellence about this plan was that when a man tendered his farm for demonstration purposes, it was an earnest of his wish to make the thing a success, and therefore of his willingness to do as he was told; for it was a good deal like a military campaign, and obedience to orders was a very necessary condition. To their credit be it said, the Southern farmers have right loyally given adherence to the plans and purposes of the work, and they have splendidly profited by it.

Doctor Knapp's theory was that when a farmer did his own work, on his own farm, under such direction, he would be sure to take interest and pride in it. His neighbors might look over the fence and sneer at the new "book farmer's" methods. That would be merely a spur to the book farmer with the courage to defy the sneers. He would be the more willing to obey in order to get the laugh on the sneerers. The neighbors, in turn, stopped to peer over the fence and observing that the convert was doing his own work, and that there was no legerdemain, no black art, about it, would be more impressed that, if the scheme was working out so well in his case, it would work in theirs.

It worked. The neighbors who came to scoff remained to pray, and next season they were dropping in for pointers from the demonstration farmer, and for counsel with the government agent who was driving around through the region, watching the demonstration farms and anxious to help everybody. Sociable chaps, these demonstration agents. If they aren't sociable, they can't hold their jobs beyond the minimum time limit required to fire 'em, and this Knapp person is a very rapid-fire individual in such cases. They don't often require such attention, however, because they are all enthusiasts in the work, and wouldn't be in it if they weren't. Most of them could make more money outside the government service; many are men of independent means, who want to push the good thing along.

For an unbelievably small amount of money, through this organization, the Knapp scheme of farming has been placed right under the noses of practically the whole rural population of the Southern states.

IMPORTANT

POSTMASTER-GENERAL HITCHCOCK is no quitter. In spite of a cold reception from Congress, in spite of a country-wide protest last spring, he is still bent on raising the postage rate on your periodicals. As a plea for popular support, he holds out a vague sort of bait in the shape of possible one-cent letter postage. It is reported that President Taft indorses his plan. We don't believe it. There are too many holes in it. We believe the case made by the publishers before the Postal Committee of the House last spring was so reasonable and convincing that Mr. Taft will hesitate to push the matter further. Be that as it may, we will give you the plan and show you what to do about it.

The plan is to specify a very much higher postage rate for the advertising portions of periodicals than for the reading matter. That sounds very pretty, but it is simply another way of making you pay more for every periodical you read. If the advertising is taxed out of the papers or so penalized that its volume materially decreases, there will not be enough revenue to allow us to give you so good a paper as FARM AND FIRESIDE for the merely nominal price you pay for it.

Furthermore it would be a mighty bad thing for the Post-Office in the long run. The advertising columns of the periodicals produce more profitable first-class mail than Postmaster Hitchcock dreams of.

The thing to guard against is this: We must not let the disgruntled ones in Congress, the unreëlected ones who are smarting under the defeat you gave them on election day, push this Hitchcock plan through.

Tell Your Congressman:

First, to look out for a possible rider to the Postal Appropriation Bill which would call for any change in the second-class rate.

Second, to get busy and vote for the Carter-Weeks Bill which will take the Post-Office out of politics and put it on an economical, non-patronage business basis.

Please do it NOW

A man with a fine farm went to Doctor Knapp and said: "If you'll give me six hundred dollars to meet extra expenses, I'll turn my place into a demonstration farm and give you some real results."

"Can't do it," was the prompt reply. "Not a dollar; we want demonstrators who believe in it enough to believe they will profit by our methods. We don't need to subsidize people and we haven't the money to do it."

The effort to interest the Southern people in corn-raising was one of the first features of this demonstration work. Results? Well, you would think so if you would look at the figures. Last year demonstrations in corn-growing were conducted on eight hundred Alabama farms, fairly representing all sections, conditions and kinds of people. These eight hundred farms averaged 33.2 bushels of corn per acre; the average per acre for the entire state was 13.5 bushels.

But the great wonder is the enthusiasm of the people. Last year the department had an appropriation of two hundred and fifty thousand dollars for this work. It wasn't a patching to the demands from all over the South. The General Education Board handed over one hundred and thirteen thousand dollars to Secretary Wilson and Doctor Knapp, to supplement the appropriation, and to be used just as these gentlemen should think best. County commissioners, city councils, boards of trade, commercial clubs, bankers' associations, individuals of means—every imaginable sort of organization or association in the South appropriates cash to help the work. State and county prizes are given for the boys' corn-growing contests, and, out of the funds which it absolutely controls—not government appropriations—the department has set aside enough to provide a fine trip to Washington for the prize-winning boy in each state. The boys get a diploma from Secretary Wilson, with the department seal on it, and a fine display of the red tape that Secretary Wilson and Doctor Knapp know so well how to flourish when it helps, and how to slash into bits with their justly celebrated common-sense scissors when it gets in their way.

This year, 1910, there are forty-six thousand boys entered for the corn-growing contests in Southern states. Each boy is pledged to handle an acre of corn, or as near an acre as practicable, under instructions, but doing the work himself. There will be over forty thousand dollars distributed in cash prizes this year for these boys, and probably one hundred thousand dollars next year.

Just think of these figures: There are seventy-five thousand farmers who, as "demonstrators," are making their farms demonstration farms, receiving direct instruction from the department agents. There are almost five hundred of these special agents, giving the instructions. Each is assigned, as nearly as possible, to a county. He visits each demonstration farm once a month, criticises, gives orders, leaves minute printed instructions and receives and counsels with all the farmers in the neighborhood who want to come around and "meet up." There are always plenty of these latter.

How One Man Blew Up

PART of the theory of this work is that it inevitably tends to improve social and educational conditions. Here's a case. A Mississippi cotton-grower reluctantly agreed to handle five eighths of an acre in 1908 exactly as the demonstration agent told him. He knew it wouldn't be worth while, but he did it in desperation, because he was hopelessly in debt and two boys and a girl were growing up, with no chance to get any schooling. Well, on that special five eighths of an acre he got a bale of fine cotton and then he blew up. He went plumb crazy. The next year he made a young fortune doing the same thing to half his farm, and raising corn, under the demonstration agent's direction, on the other half. Now his two boys are in high school, his daughter in a girls' seminary, and the man takes eight agricultural papers, reads all the Mississippi and department bulletins on agriculture, and is a community nuisance because he has got the proselyting fever on him and is bent on getting all his neighbors rich by the same process. Is it a good thing for the South? Rather.

All this work is being done, so far as the federal government is concerned, in the cotton states, because it is being done under the appropriation bill's provisions for "aiding in combating and exterminating the boll-weevil." That looks like a discrimination against the North; but the truth is that the department's experience shows that the South is the more responsive section. The congressmen from the Southern states have to keep on the jump all the time, working up new stints whereby to make the Department of Agriculture do things for their people. Northerners haven't got stirred up to the possibilities of the game.

"Talk about your corn contests and good-seed crusades at the North," said a satellite of Doctor Knapp, "why, they aren't a circumstance compared to the way the whole South has gone crazy on the subject of bettering agriculture. The South is getting into stock faster than anybody realizes. The fever tick is being exterminated throughout larger sections every year, and as that goes on the stock business grows. The South will be making a big contribution to the national corn yield in the next few years. The North is a long way ahead in actual farming as yet; but the South is coming with seven-league strides. Northern farmers need to have something come along and shake 'em up just as this boll-weevil crusade has shaken the South. It will come, one of these days, and it will do some revolutionary things to farming in the North. There is too much self-satisfaction among the Northern farmers. They have had so much prosperity in recent years that they don't realize that the South is overtaking them."

POOR RELATIONS

By Adelaide Stedman

Author of "Miracle," "Intellectual Miss Clarendon," Etc.

Illustrated by Herman Pfeifer

Outline of First Instalment

MARION and Penelope Martin, who are left penniless by the death of their father, go to New York City to make their living, Marion hoping to be a newspaper woman and Penelope intending to start as a decorator. The girls are alone in the city except for their father's wealthy relatives, who do not wish to be troubled with poor relations. After a visit from their Aunt Clem and Cousin Penelope the girls learn that they need expect no help from them—that they must fight their fight alone. The rich Penelope is engaged to John Hastings, a newspaper editor to whom Marion has a letter of introduction. After many discouragements, Penelope is commissioned to refurnish the home of Mr. Shreve, who lives at New Rochelle.

Chapter VI.

SATURDAY morning dawned cold and gloomy. All day long a high wind whirled the last autumn leaves from the trees and reminded all who ventured out that October was fast abdicating in favor of his wintry successor.

The girls remained in their room, dreading their promise to dine with their cousins. "Oh, dear, I never felt less like being patronized and talked down to," Marion sighed as they began dressing late in the afternoon. "But then we haven't met Uncle Charley yet—of course, he's our blood relative. I can't help hoping that he will be friendly, anyway."

"Marion, you would build an air castle with nothing more substantial than a soap-bubble for foundation," her sister protested.

"Well," the girl smiled, "if you must be practical, Miss Martin, I think a complete dinner from soup to black coffee will do us both good."

Penelope looked downcast. "Isn't it awful to even think of such things," she said drearily. "As if we would go for any such reason."

"Of course not, honey," Marion soothed her. "I was just talking. But for goodness sake, Pen, don't get gloomy. You are usually so strong that when you give way, I'm frightened. You are a regular Rock of Gibraltar and I'm a quicksand."

Penelope had to smile, the girl looked so comically woe-begone pulling at the golden curls on her forehead. "I'm not wretched," she responded. "Stop dreaming, Marion, and get dressed."

At quarter-past seven the two young ladies reached their uncle's gray-stone house, rang the bell outside of the gorgeous bronze door with its glass background. A tall man-servant admitted them. "This way, please." The girls followed obediently as he led them into a tiny rose-upholstered elevator which in a moment landed them up-stairs. There in the hallway was a capped and aproned maid who conducted them to a room to remove their wraps. It was all as formal and as silent as a state function.

Marion and Penelope took off their hats and coats, then surveyed themselves rather ruefully in the cheval glass. Their simple black gowns cut away at the throat, but neither elaborate nor elegant, looked almost shabby in their surroundings. Never had they seen such magnificence. True, Marion's animated face was exquisite in its dainty coloring and Penelope's dark head was almost statuesque on her firm white neck, but both of them were depressed and self-conscious; keenly aware of the deficiency of their toilets.

Finally they were dropped down again in the same dainty elevator, and the butler led them across a spacious hall, carpeted with priceless Persian rugs, and up to a doorway hung with crimson brocade. He drew aside the curtains and bade them enter.

The girls hesitated a moment in pure pleasure, as they gazed at the magnificent room, exquisite in its warm red furnishings. Then, by a large grate fire, gleaming gold, they saw four figures.

"How do you do, my dears," the most ponderous of them drawled, rising heavily.

"Good evening, Aunt Clem," Penelope returned quietly, her grave eyes steady.

Marion's cheeks matched the brilliant room, as she made her greetings and advanced toward the rest of the group.

An elderly gentleman, powerfully built and heavy, came forward, his thick brown hair and mustache grizzled with gray.

"You are Uncle Charley," Marion exclaimed cordially, holding out her small white hand.

He took it perfunctorily. "You are James' girls, eh?" he questioned gruffly with no other welcome. His wife and daughter had told him of the supposed "hint" in Penelope's letter and already he disliked them.

Penelope was treated to a similar handclasp and then Mrs. Martin introduced them to Fred, the twenty-two-year-old son of the house.

He came forward eagerly, his eyes on Marion, "I'm jolly glad to know you both," he exclaimed heartily. "To be able to claim two beauties as cousins is a privilege, and I'm going to use it, by Jove." He smiled maliciously at his mother and sister as the girls recovered from his effusive welcome. However, even his forward boyishness was better than cold hauteur.

In a few moments dinner was announced and they all went into the dining-room with its tapestried walls and old oak furnishings.

Marion, who was walking by Fred, exclaimed impulsively, "Cousin Fred, it ought to make people great to live in such a wonderful house."

His sister, who overheard the remark, smiled patronizingly. "You see, a man has to be rather great in the first place to be able to own one," she explained.

"Of course," said Marion, her quick temper aroused. "Isn't it a pity that they're so often inherited by the useless descendants of great fathers?"

"That's one on us, Pen," Fred chuckled.

"Oh, we weren't speaking personally, of course," Marion dissented, looking straight at Penelope. That young lady was gowned magnificently in yellow satin, a gold bandeau embroidered with pearls gleaming in her brown hair. She and Mrs. Martin were going to a dance later and she had requested her mother to dress for dinner to show those girls more clearly the gulf between them.

"Her questioning eyes were fixed on him while she asked softly, 'You are Mr. Hastings?'"

To Marion and her sister the dinner, from the grapefruit, served in high glasses filled with tinkling bits of ice, to the black coffee in tiny silver cups, was a wonder, an embarrassment and a torment.

Some women are past-mistresses in the art of making people uncomfortable. Such a one was the elegant Penelope Martin. All of her speeches seemed to contain innuendoes to hurt and humiliate her cousins. They felt they were being endured, tolerated—each word they said appraised and criticized. Tears almost came to Marion's eyes when, on breaking the flaky crust of an entrée, her hand trembled so with mortification that a bit of it flew off the plate. She felt so gauche, so awkward. She could almost hear Penelope say after they had gone, "I was positively ashamed before the butler. You could see so plainly that she had never seen such a dish in her life."

When they finally returned to the library, Marion's eyes eagerly sought a clock. When would the happy leave-taking moment arrive? "I hear you have literary talent," Mr. Martin remarked as he came into the room and sat down beside her.

"I hope I have," the girl returned shyly, wondering at this first evidence of interest in their affairs. "And your sister does decorating, eh?" the gruff voice went on.

"Yes," Marion responded almost hopefully, wondering if her uncle desired to befriend them after all.

But Mr. Martin had no such kind-hearted intentions. On the contrary he wished to make perfectly plain the fact that he declined to play the rôle of fairy godfather.

"Um," he went on positively. "It's always best to have a distinct profession. You ought to get along easily enough. I quite respect your independence."

"Thank you," Marion murmured, her eyes lowered to hide her anger. She would not allow him to see any signs of emotion.

"I have plenty of examples of the 'clinging vine' kind of relatives," he went on. "You would be surprised how large the family of a successful man is." Mr. Martin had no conception of the finer ethics. The feeling of a guest beneath his roof did not trouble him at all. His ideas of right and wrong were defined by heavier distinctions.

"It is queer, isn't it?" Marion assented. "It would seem as if family ties were made of golden links, and when any material less strong is used, they break, slowly but surely."

"Um—" Mr. Martin nodded. "That is a bookish way of putting it. It's only natural that when people are making for a certain end that they should shake off clinging encumbrances."

Marion flushed and wondered if they were suspected of the desire to become "clinging encumbrances."

At this point Fred, who had left the room, looked in at the door. "Jack wants you on the 'phone, Pen," he announced. "Wants to know if he should call for you this evening."

Penelope turned white and hurriedly excused herself. She had no intention of having Mr. Hastings meet her poor relations.

As for Marion, she felt terror-stricken. Was it fated that she should meet this man in her cousin's presence? She resolved to leave immediately. "Sis," she said unsteadily, as Penelope reëntered the room, "I think we must go now."

"Oh, it is early yet," the hostess demurred listlessly. Then turning to her daughter, she said in an undertone, "I hope they do go if Jack is coming."

"He isn't," Penelope smiled wisely. "You don't suppose that I would allow that. Besides, the Comte de Feronac promised to stop for us on his way from the Granger's dinner."

During the next few minutes the girls bade their relatives good-by, quietly and with reserve, wondering meanwhile if they were to be allowed to go home alone.

Such a thought occurred to Mrs. Martin, also, but she would not offer Fred as an escort. He was too much engrossed by Marion already. "I am going to send you home with a maid, my dears," she declared, but she had reckoned without her son.

"Oh, no," he protested. "I will do the honors."

"But, my dear," his mother spoke sweetly to hide her chagrin, "I thought you were going to the Junior Cotillion."

"I am—later."

There was nothing more to be said, so very soon the girls were on their way under Fred's complaisant protection.

Marion was determined to appear at her best, to show her cousin that she was not a timid, embarrassed school-girl. So she indulged in many laughing sallies which brought them all into a spirit of merriment by the time they reached their hotel.

Fred eagerly asked permission to call, but Marion put him off with cleverly veiled excuses. She had determined to have no intimacy with her uncle's family. It would only be misunderstood. The thought of the evening's ordeal brought a flash to her eyes as Fred said "Good-night," and when they reached their rooms, she cried angrily, "Penelope, weren't they mean? I wouldn't accept any help they offered now, if they begged me to!"

"Don't get excited about it," her sister warned. "You won't have the opportunity to refuse it. Fred seemed to like you, Marion."

The girl laughed sarcastically. "He is such an utter silly, I hardly think it is a compliment. I hope he never calls; but if he does, we will be out—always! From now on we must try to forget the whole family."

Chapter VII.

MR. HASTINGS smiled with pleasure as at eleven on Monday morning he admitted his fiancée and her mother to his office. It was their first visit and he waited for Penelope's words of approval with ill-disguised eagerness.

"So this is where you write those wonderful editorials," the girl questioned. "John, I wish I were a man and could do things, but I can't. You employ ever so many women, don't you? Somehow, a business woman is a misplaced being to me. Oh, Jack," she put her hand on his arm, "as your wife, I will sit on a cushion and sew a fine seam and feed upon strawberries, sugar and

[CONTINUED ON PAGE 30]

In the Christmas Dawn

By Winifred Kirkland

Old eyes open early and old hearts live over their long memories in the hours when young ones are still fast asleep. In the blue-black of the windows the Christmas stars were burning frosty and clear, as old Madam Clarke lay quietly thinking. She had lived through many Christmases both glad and sad, but this would be the loneliest of all, lonely with age and idleness and emptiness. She had been a busy woman until a year ago, and even then she had not been quite willing to be still, even at seventy. Last Christmas had been lonely, too, but not like this, for she had been making all the preparations for the return of Bobby and his bride from their three months in the South. It was the last thing she had been able to do for Bobby, to make the house ready for his bride.

Quietly the old house had welcomed Rachel, quietly it had closed about her, for she was not one to make much stir at her entrance. Her footfall was light on the broad twisting stair, her little bridal frocks were as subdued as they were dainty. The only difference the house showed at Rachel's coming was that flowers began to blossom everywhere. Madam Clarke and Letty and Cora, the two old servants dismissed with pathetic acquiescence in Madam Clarke's decree of new maids for the new mistress, had thought flowers rather messy, but from the first Rachel's flowers had seemed very lovely, roses and carnations gleaming from the old mahogany tables or the pale-rimmed old mirrors, just as Rachel's golden head gleamed beneath the sconces.

In the quiet of the starlit Christmas morning Madam Clarke smiled to herself a little ruefully now and then thinking how successful her methods of the past year had been. Even Bobby had believed them genuine, well as he knew his mother, but then Bobby was a man, and men believe what women tell them. But Rachel was a woman and might have guessed. Of course, of course, Madam Clarke did not want Rachel to guess, but still it would have been so much less lonesome if Rachel had guessed.

At the home-coming Madam Clarke had set the great house in order and had then retired to her southern bedroom on the upper floor, and all cheerily and humorously had shut her door fast upon the children. She had steeled her heart against Bobby's wonder and Rachel's wistfulness. At meals she had been unobtrusively companionable and quite obtrusively unconscious when anything in the household went wrong. Competent as she was she had never even looked advice. She told them she was sick of housekeeping, that she had bustled all her life, and that now she wanted to be alone in her room with her knitting or her books and enjoy herself. Few girls would have dared to break through Madam Clarke's sunny indifference to all household happenings, and Rachel was far too shy to intrude upon the privacy of that south room. It was all because Madam Clarke believed that Rachel had a right to her mistakes, when there was a Bobby to excuse them. His mother knew how beautiful a little wife's blunders become when there is a man like Bobby to wipe all tears away.

But after the coming of a wee new Bobby to the old house it had been harder. Yet even Bobby believed the baby bothered his mother. She said she did not like to hear him cry and asked that the nursery be at the other end of the house. She said she had brought up four babies and that was enough. Against the baby she shut her door closer than ever, for it was the only way she could keep her hungry lips and hands from fondling him, and Rachel had all the right to her first-born child. It was well for Madam Clarke that Rachel was as particular as the grandmother herself could have been about the nurse, and that the baby was so sturdy that no inexperience could have hurt him. In the three months of his life Madam Clarke had not held him in her arms half a dozen times.

It was still dark when Madam Clarke got up, for breakfast was to be early that morning since Bobby and Rachel and the baby were going off by train to spend the day at Rachel's home. When the stars first began to pale in the window-squares Madam Clarke turned out the gas, for the soft shadows fitted better with her thoughts. How still the house would be! All day long she should not hear behind her closed door the household music. Bobby's shouting of Harvard airs while he blacked his boots, the baby's gurgling and crowing in his bath, the low lilt of Rachel's voice breaking sometimes into a silver ripple, for the baby and Bobby were the only people in the world that had ever made Rachel laugh out loud—how still the house would be, and it was Christmas!

Suddenly a low knock and a far less hesitant ga-ga sounded outside the door. Madam Clarke opened it upon Rachel, standing there in her blue kimono. It made the mother think of the pictures in old cathedrals dusky as the south room in the early Christmas light, pictures of a girl in a blue robe whose eyes bowed above a baby in her arms. Rachel was pale for very shyness, while her breath came and went upon her parted lips.

"Will—will—will you take him, please!" Rachel rushed to her end precipitatedly.

For pure astonishment Madam Clark sat down and Rachel laid the baby on her lap and knelt on the floor before them. He lay gurgling at them genially. He was done up in a blanket, which also contained his day clothes in a hurried little wad.

"Bobby and I are so busy getting ready," Rachel went on with breathless courage, "I thought perhaps you'd dress him—you know Annie went away last evening for the day—and take care of him—perhaps—while we're away, Bobby and I, to-day?"

"Dear, I have told you that I have taken care of four babies and that that is enough."

"But I know it isn't!" said Rachel.

"I've told you I can't bear to hear him cry."

"But I've seen your eyes when you look at him."

Madam Clarke made a last stand. "Rachel, I have told you that I want no more responsibility of any kind. All I want is an old age to myself, and rest."

"At first I believed you," answered Rachel, "and then I began to wonder, and then at last I made up my mind to come up here and find out, to-day."

Now first the grandmother allowed herself to look down at the baby, cradled on her knee.

"But, Rachel, don't you want to take him to your own mother, to-day?"

"Yes."

Still Madam Clarke held her quivering hands from touching so much as a hair of the baby's head, as she answered,

"Then why don't you take him, dear?"

"Because much more I want to leave him here with you, alone, all day, for—for a Christmas present."

Madam Clarke lifted the downy bundle to her heart. She had a whole drawerful of gifts for Rachel, but still she said, "Sweetheart, I have no present for you, like this."

"No present?" said Rachel, "but you have given me a present." She drew a deep breath, "I think no mother ever gave a son to any wife as you have given Bobby to me."

Their eyes met, then dropped, because they said so much. At last Rachel

[CONCLUDED ON PAGE 31]

Because of You

By Almon Hensley

Sweet have I known the blossoms of the morning
Tenderly tinted to their hearts of dew;
But now my flowers have found a fuller fragrance,
Because of you.

Long have I worshiped in my soul's enshrining,
High visions of the noble and the true—
Now all my aims and all my prayers are purer,
Because of you.

Wise have I seen the uses of life's labor;
To all its puzzles found some answering clue,
But now my life has learned a nobler meaning
Because of you.

In the past days I chafed at pain and waiting,
Grasping at gladness as the children do;
Now is it sweet to wait and joy to suffer,
Because of you.

In the long years of silence that part us
Dimmed by my tears and darkened to my view,
Close shall I hold my memories and my madness,
Because of you.

Whether our lips shall touch or hands shall hunger,
Whether our love be fed or joys be few
Life will be sweeter and more worth the living
Because of you.

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SKINNER'S SATIN

Esme and the Turn of the Tide

By E. M. Jameson

THE two men now had the deserted parade to themselves, until a girl's slender figure appeared around the curve of the beach and, mounting the roughly-hewn stone steps, came swiftly toward them. The well-cut white serge skirt swung away from her slender ankles, a large white shady hat kept the sun from her eyes. She flushed a little as she caught sight of them, and her brows came together in a frown. She hesitated for the fraction of a second, then advanced again, accelerating her pace as she neared them.

There was no smile in the glance she bestowed upon Faraday. The color had ebbed from her face, and she was very pale as she bowed and passed on. The younger man turned impulsively to look after her.

"Lucky, *lucky* chap!" he exclaimed, "who in the world is she? So that's the attraction in this dead-and-alive hole. Always wondered what brought you down here. She's the loveliest girl I ever saw. Such eyes, such—"

He stopped abruptly. Faraday was frowning a little. A dull flush had deepened the sunburn of his face, and his expression, moody and wretched beyond all words, was a revelation to the younger man. They had turned to retrace their steps, and Barnett's eyes went again to the slender white figure in the distance. But Faraday only stared moodily across the stretch of misty, foam-flecked blue to where sea and sky mingled in the horizon line.

The light figure had crossed the road and disappeared before he spoke.

"Miss Tempest and I are to be married at the end of the year," he said, "and if you don't mind—"

"I'm awfully sorry," interrupted the younger man, a puzzled air about him, "I had no idea, of course; one always imagined you a confirmed old bachelor—no, at least—hang it all, I'm making a fool of myself again!"

He gave a rueful glance at the other's gloomy face and began to laugh.

"Yes, you *are* a thrice-lucky chap to have secured her. Why shouldn't I say it? Wish you'd had time to introduce me; she seemed to be in a hurry, though."

"She usually is in a hurry when I am about."

"But I thought you said—" began Barnett, bewilderedly.

"We are to be married in a few months," Faraday turned again and walked slowly along toward the unfinished end of the sea front, "and she dislikes me. Naturally you will say, 'Why marry under such conditions?' Because I'd rather have her, with all her aversion to me, than another woman who loved me. I know I'm laying up untold misery for myself in the future. I'm wretched with her, God knows, but it's absolutely torture to be away from her," and his voice broke off hoarsely.

Barnett looked in amazed silence at the rigid face. To him Faraday had always seemed as hard as iron, without a tinge of sentiment in his composition, and here he was in the grip of a passion which his light-hearted listener could never touch if he lived for a century.

"I'm frightfully sorry, Faraday, it *is* hard lines. Does she—does she know how much you care for her?"

"Know? Of course she knows. I've never told her in so many words, but a woman always knows by instinct. I simply can't express my feelings to her. She freezes me into silence. I hardly dare touch her hand. Rather rough on a man who has never bestowed a thought on other women to meet his fate in such a way. Sometimes I wish to heaven I'd never seen her, and yet—" he beat his hands upon the iron rail on which he leaned, "life was incomplete until I met her and knew—" He turned to the other, his face growing less tense, "You should see the way she has with children, Barnett; somehow—it wrings my heart. The other day I watched her picking up a grubby mite that had fallen and cut his knee. She bound it up with her ridiculous little handkerchief, and in a moment had him laughing through his tears. But for me—"

"I've known you good to kids yourself," interposed Barnett, gruffly, dislodging the pebbles at his feet. He felt desperately sorry for Faraday. Though there was a considerable difference in age between them, they had been fast friends for years. Their temperaments and tastes were totally dissimilar, yet each found a curious pleasure in the society of the other.

"You are quite sure she does not care?"

"Absolutely."

"Then you'll have an infernally miserable time, Faraday. Give her up. If it's unbearable now, it will be a thousand times worse when you are married. My pride wouldn't let me marry a girl who shirked marrying me."

"*Pride!*" Again Faraday gave that short laugh. "I haven't a shred of it where she's concerned. However much she despises me, I mean to go on—"

"Then why is she marrying you? There must be some reason."

Again Faraday flushed, a dark slow crimson that crept up to his temples and beyond to his close-cropped hair. He hesitated a moment, then spoke in a deliberate dogged way.

"Her father is heavily in my debt; he plunged into all sorts of mad speculations. I told him I'd wipe the slate clean if Esmé would be my wife."

Barnett frowned.

"I shouldn't have thought you capable of such a thing," he broke in, "you've always played the straight game."

"No one knows better than myself that it's a despicable thing to marry a woman under such conditions, but I mean to do it all the same." He gave a shrug of the shoulders. "You've never been in love, Barnett."

Barnett turned on his heel as if to go, then came back, his hand on the other man's arm.

"Give her up, Faraday, before you've ruined her life and your own. You'll be sorry when it's too late. After all, you've heaps of money, you can well afford to wipe the slate clean."

Faraday turned on the speaker in sudden fury.

"Good heavens, man, the money doesn't count beyond the fact that it secures her to me! You simply can't understand."

"I certainly can't." Barnett's face lost its geniality, and something like amazed contempt showed instead. "You're not yourself in this—the straightest chap I ever came across—and yet you can deliberately take advantage of her father's actions to force her into marrying you."

Faraday laughed.

"Mad, I grant you," he said, "but yon can't enter into my feelings. Going?" as the other turned on his heel and walked away.

Before he crossed the road Barnett looked back, and saw him still standing there, his eyes turned to the distant horizon.

Across the golden ribbon of sand, the tide made its way in leisurely fashion, so slowly, so imperceptibly, that it would have needed a practised eye to perceive that each wave, as it retreated, left a creaming line of foam a degree nearer the rocks.

A shimmering haze of heat overspread sea and sky; it was not easy to see where one ended and the other began. There was a lazy magic in the air that stirred the blood. It was impossible to be altogether unhappy on such a day.

Esmé, looking out across the lonely waste of waters, felt that strange, unaccustomed restlessness drop away from her. She had the sands to herself this golden afternoon, there was not a soul to be seen on their deserted length. From among the cliffs that hemmed her in on one side came the haunting cry of a seagull, whirling to and fro with a soft beating of wings."

Close beside her, protruding gauntily from the sand, were some pieces of timber thrown there from a wreck several years before. They had become so firmly embedded in the sand that no storms or tides affected them now. Esmé sat down in the shadow of them and threw off her hat. Here she was out of sight and sound of humanity, able to give rein at last to thoughts of the future. The incoming tide held a fascination for her. Each wave, as it advanced, brought to mind her marriage. The days were drawing nearer slowly, inexorably, with the relentless accuracy of the tide. There was no turning back, she was hemmed in by circumstances not of her own making. She thought of her father, half crazed with his losses, clinging selfishly to her and to her promise as a drowning man catches at a straw. Faraday's face rose before her, a strong, roughly-hewn face, sun-tanned and resolute, with something inscrutable in the eyes and mouth. He was as a stranger to her, and as the days went by the strangeness continued, in spite of that curious stirring of the pulses which came at his approach. His strength held her as surely as her father's weakness.

She wished she understood Faraday a little better. He talked fluently enough to her father, on business matters, she supposed, but with her he grew suddenly silent, making her silent in her turn. Sometimes she found him looking at her with an expression in his eyes she could not comprehend, which in some vague way caused her to feel sorry for him.

To-day the restlessness had gone, but in its stead was a vast depression, a longing to get right away where she could be herself, free to live her own life, untrammeled by other people's mistakes.

The gentle, persistent iteration of the waves filled her with a sudden wild revolt. She rose and threw out her arms wide. She had always been in subjection, she was tired of it. She must, like other women, be free to choose. She would appeal to him, tell him what was in her mind. Then her father's face rose before her. Even as a child she had played her part in keeping his path smooth.

The sea frothed in serenely, persistently, all the more inexorable for its serenity.

She turned away, tears falling down her face, and as she turned she saw Faraday making his way toward her. Like a child, she put up her hand and brushed the tears away, but not before he had seen them. She glanced up, half shamefacedly, forgetting to be cold, and looking so young, so forlorn, that into his eyes dawned the look she had sometimes surprised there. But this time she did not see it. A sudden sense of shame overcame him, and again that slow, dark flush crept over his face.

He looked down at her in a momentary silence, finding a difficulty, as usual, in expressing himself.

"I seldom see you alone," he said, with the rather old-world formality to which she had grown accustomed, "and now that we have met so unexpectedly I shall be glad if you will spare me a few moments. I want to explain to you—to tell you—"

Her glance went from him to the sea and on to the wall of cliff that formed a background. It seemed to say, "I can not very well get away from you."

He experienced a sensation of anger.

"I will not, of course, keep you against your will. Surely you are not afraid of me?"

Her color rose. She gave him a quick glance, and on her lips dawned the first smile he had seen there.

"I believe I am a little afraid of you," she said, with a kind of serious naïveté, "only a few moments ago I found myself wishing that we could be more friendly. If I must marry you, it would make things far less difficult."

Faraday stared down at her. His pulses quickened, then beat more slowly again as he flung temptation aside with a painful conflict of thought.

[CONCLUDED ON PAGE 31]

Christmas Parties for Girls

By Mary Dawson

EACH recurring holiday can boast many successful parties, but for genuine fun and frolic nothing can altogether come up to Christmas merrymaking, and particularly the one which, from beginning to end, the young girl in her teens plans and carries out for her young friends.

All of us who have tried know how thoroughly jolly such an affair is apt to be. How the all-pervading Christmasy feeling keeps the most sedate damsel in mirthful mood, while even the pungent perfume of the evergreens seems to help the mirth along!

A Holly Frolic

I once attended a holly frolic given in Christmas season in the country. It was a very inexpensive party, but gatherings that have cost ten times as much have proved infinitely less jolly than this one did.

We were invited by means of little folders of cardboard cut in the shape of holly leaves. The board was doubled once and then cut to resemble a little booklet or Christmas card, on the outside of which was written in red ink a quotation or an original verse about Christmas and on the inside the invitation.

The house was decorated with holly, a great bough of which hung over each door as we passed in—with ground pine and other garlanded greens.

The guests were all young folks in their teens, and as many of the company had to come from a distance, braving the December weather, our hostess had the happy idea of beginning the fun with supper, instead of having this come last as usual.

The table trimmings were extremely pretty. They seemed especially so, knowing as we did that the young daughter of the house was responsible for everything in that field, and the table, as we trooped gaily into the dining-room, was indeed a thing of beauty.

In the center of the hospitable board was a mound of raw cotton sprinkled with diamond-dust which shimmered like a snow-bank. The bank itself was indented deeply at the top and in the hollow were grouped together as many little bouquets of holly as there were girls present, the effect being that of a solid bed of the lovely red and green.

From each bouquet a streamer of scarlet crêpe paper about three inches in width radiated to the cover of some guest. There were similar mounds of cotton covered with diamond-dust under the candlesticks, and although ordinary candles were the only ones available new candle-shades had been made from cardboard decorated with a water-color design of holly, and the lovely old silver candelabra which had "come down in the family" were used. Preserved cherries and little home-made cakes with the word XMAS and the date iced upon them in red and green helped carry out the color-scheme.

Nothing unusual or expensive in the way of a menu was attempted—just a simple country supper. But how good that steaming hasty pudding did taste with its accompaniment of genuine maple syrup. With cold meat sliced thin, baked apples, hot biscuits, coffee and the cherries and little cakes for dessert we felt that we had fared like royalty itself.

What They Played

After supper we adjourned to the big living-room where an open fire blazed genially on the hearth and here all kinds of games and contests had been planned for. For one of these we Rang the Christmas Bell with bean-bags covered with turkey red which gave just the right note of color. The Christmas bell between ourselves was none other than the family ding-dong used to summon the household to meals, but tricked out in successive frills of crêpe paper of holly design it was quite festive and unrecognizable. Each player had three "shies" with the bean-bags and the one whose score was the highest won a pretty calendar for the coming year with holly design.

Of course, we had a blindfolded game, as this is something which everybody enjoys. In this instance the genial rubicund physiognomy of St. Nick had been sketched on a muslin square with colored crayons. This was tacked up in the doorway and each player was required (blindfolded) to pin a sprig of holly into the good Saint's cap. Most of the sprays went wide of the mark as usual and those who shot widest were condemned to do ludicrous stunts which kept the room in an uproar for the next fifteen or twenty minutes. For instance, one unfortunate player was told to draw a picture of St. Nick in the air using his fore-finger as a pencil, while another was condemned to "make a noise like St. Nick coming down the chimney."

The person coming nearest to the mark on the contrary won a pretty sachet made at home from a linen paper envelope decorated with holly berries in water-color and tied with red ribbon.

I must not forget to mention the lively game where one person armed with a handful of raw cotton dipped in flour on the end of a long flexible stick wand pursued the rest with intent to tag. Every one who received the telltale white dab was compelled to deliver up a handkerchief, penknife or other belonging to be redeemed later on. We all won ours back by the same stunt, which consisted in removing a dime from a pan of flour with the teeth.

Next some one suggested Going to Jerusalem, and several rounds of that staunch old favorite were played before the company could be satisfied. It was played in rather a new way—namely, with sides instead of every one for himself as usual. This change made it even more hilarious.

Almost every one knows this rollicking game, but in case any hostess' memory needs jogging it is where seats for all the company, less one, are placed back to back and players march around them beating time with the hands while the piano reels out a lively tune. When the music stops, which is always suddenly, for instance, in the middle of a measure, players endeavor to drop into the seats. The latter being too few one person is always left out in the cold.

The feature with which the party closed is too pretty to omit. I mean the arrival of the Spirit of the Holly with our fortunes for the New Year. Of course, the Spirit was one of the girls of the neighborhood in league with the entertainer. Very lovely she looked in a loose flowing robe of ordinary cheese-cloth with a holly crown, a green ribbon as girdle and a large bunch of the glossy leaves and berries caught in it. She carried aloft a large Christmas pie (a pie-dish covered with dark manila paper to represent crust) surrounded with a wreath of holly. When the crust was removed the dish was found to be filled with envelopes. Each one found his little missive by initials on the envelope, and opening it one read a laughable fortune for the twelvemonth.

A Yuletide Merrymaking

At another Christmas gathering the guests were greeted with a handful of confetti snow (which is simply soft white paper cut into small fragments), while the pretty jingle of unseen sleigh-bells was distinctly heard at the same time.

At this little jollification, supper came in its conventional place, at the end of the amusements, but little cups of hot beef-soup were passed to all arrivals in view of the chilly weather. A few toast squares were laid on the saucer around each cup. Where soup would be too much trouble pass cups of hot tea with a tiny sweet cooky or nut-wafer on each saucer.

The first feature of the evening's fun was the good game of "Pass It" played with nuts. Players sat in two rows of exactly equal numbers and those of one row were rivals of those in another. At the end of each row the hostess placed a tin plate containing fifteen English walnuts (chestnuts or peanuts will do as well). These the person at the head of the row proceeded to hand to the player who sat next to her. Not until one had received the very last of the fifteen might the player pass them on to his next-door neighbor and so on along the line. Of course, the idea was to see which row could pass its nuts most quickly to the person holding the end seat, after which they had to be passed back again. Players who succeeded in getting all their nuts back to the original starting-point ere the opponents could do so were proclaimed victors.

A literary game came next. Pencils and paper were distributed and each one in turn was asked to name a word. These words were written down and afterward the entertainer called upon everybody to write a little Yuletide story or anecdote and weave into it all the given terms. Only twenty minutes were allowed, but some really clever little tales were evolved under pressure in that time. All those effusions which could lay claim to a conclusion were read aloud and we voted as to which was cleverest. The person receiving most votes won a pincushion of red velvet in the form of a star, home-made but very dainty.

Apropos of gifts, the hostess, it came out later, had a souvenir of home manufacture for each of the guests and these mementos were distributed in a most amusing manner. The needle-book or match-holder or book-mark as the case might be, was enveloped in successive folds of paper, beginning with soft tissue, until a really large and rather unwieldly bundle was formed. The fun lay in carrying these over a prescribed course balanced on teaspoons, the bundler proceeding at a brisk pace. Any bundle which fell off was lost to the person carrying it, while the successful ones were entitled to open theirs and possess themselves of the contents. Before the company broke up those who had failed received theirs, also.

A Scramble Game

An equally funny scramble game was Filling the Children's Stockings. Here six stout worsted hose were pinned with clothes-pins to a rope which was stretched across the room on a level with the shoulders of the players. A big basket of apples was placed at the end of the room and at the word "Go" six trusty players armed with wooden spoons advanced upon the basket at a trot. The game was to see who could in five minutes put most apples into the stocking consigned to his care. When one round had been played the first six retired and another half dozen essayed their luck or skill.

At the end of this game the boys and girls were summoned into the dining-room where refreshments were served, consisting of turkey with cream sauce, apple-sauce and corn-muffins, chocolate topped off with whipped cream and cake.

The cake served as dessert at first formed the centerpiece and a very effective one. It was beautifully iced in white with a circle of tiny red candles surmounting it and a garland of evergreen encircling the base. From this wreath similar green garlands trailed in curved lines over the table-cloth forming a graceful cart-wheel design. Here and there caught in the green were tufts of cotton snow aglow with the sparkling powder, while side dishes of white sugared pop-corn looked very like powdery snow-flakes.

Rag-Doll Dance

Two sisters who are limited as to pocket-money, but rich in invention, acquired a reputation for originality at one of their Christmas parties by giving a most laughable rag-doll dance.

As the feature is one which any two bright girls can get up at an hour's notice I want to tell the girl readers of FARM AND FIRESIDE about it in view of holiday merrymakings this year.

No stage was, of course, available, but the folding doors between two rooms gave the suggestion of the histrionic boards.

The human dolls were dressed with cotton wrappers, gingham aprons and white neckerchiefs, but all garments were in looking-backward style. That is, the apron-strings were tied in front at the waist and the points of the kerchiefs met in the middle of the back. The back of each girl's head was covered with a round piece of muslin on which the features had been painted rag-doll style and this was surrounded with a close-fitting frill to give the effect of a cap.

When the folding doors were drawn back the dolls reposed as if asleep, but always with their faces away from the audience, an attitude which, of course, was never abandoned during the performance. The piano sounded softly and the dolls awakened in a series of jerky, floppy movements which convulsed the onlookers. The jerks quickened into a dance which, although in time with the music, was absurdly laughable and rag-doll like.

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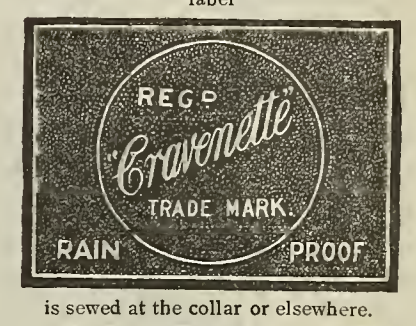

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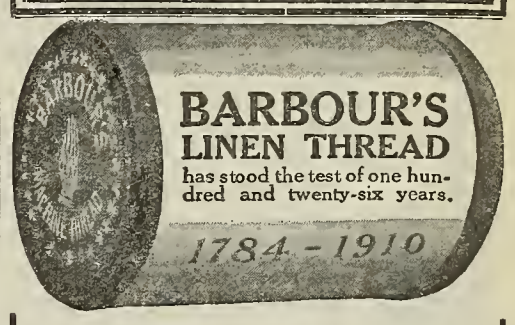

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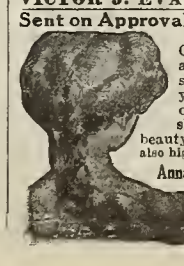

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WHEN the Wise Men saw the star they rejoiced with exceeding joy. Because it was the Star of Hope. The divisions of our theme radiate from the five points of that star. First of all

Worship

Those wise men from the east were learned men for their day. They knew science, medicine and astrology; they began to study the new-found star. Perhaps it was a conjunction of planets. Kepler calculates that there was at that time a brilliant temporary star in the heavens. It was the "wisdom and goodness of God in the combination of circumstances." This is what the Magi saw. The report had reached their country that a great King was to be born in Judea. So these wise men followed the light across the deserts because it seemed to them a star of promise. It led them to Jerusalem, and on arrival they began to say: "We have seen His star in the east and are come to worship Him."

There are four conditions when a man is disposed to worship and pray. Far out upon the ocean, standing upon the deck of a steamship with nothing but the broad expanse of limitless water around you, man's spirit is subdued and bows in humility. "The sea is His and He made it." Up on the summit of some majestic mountain with the solitude of forests waving beneath him, the far-away stretch of prairie, the grandeur of the earth at his feet, a man wonders and prays. "Before the mountains were brought forth." Looking up on a December night into the star-lit heavens, we gaze into sublime heights and the great luminaries talk of God and the soul breathes a prayer to the Creator. "The heavens declare the glory of God." In the presence of a noble life, pure, masterful, true, loving, man is moved to praise.

Some one relates how Charles Lamb met with some friends and in the course of their talk it occurred to them to speak of the effect on themselves if they could converse with the wonderful dead. "Think," said one, "if Dante should enter the room. How should we meet the man who had trod the fiery pavement of the Inferno, whose eyes had pierced the twilight and breathed the still clear air of Mount Purgatorio, whose mind had contemplated the greatest mysteries?" "Or suppose," said another, "Shakespeare were to come?" "Ah," said Lamb, "how I should fling my arms up! How we should welcome the king of thoughtful men!" "And suppose Christ were to enter?" The whole face and attitude of Lamb in an instant changed. "Of course," he said in a deep tone, "we should fall upon our knees." On Christmas morning with all the wise men of the ages to-day we may join that group around the Bethlehem cradle and with words of worship upon our lips and a star of hope beaming in our hearts bow at the manger of the newborn King. "Glory to God in the Highest!"

The second point in our star is the graceful salutation:

Good-Will to Men

That touches a responsive chord in human life. It is the note of conciliation. It helps you to see good traits in your neighbor. This is a time to forget all differences. Will you? Christmas will mean something new to you then. Immanuel spells forgiveness. The Christ-child pleads for your good-will to men. Somehow God had been misrepresented to men. He was now no revengeful deity on Mt. Olympus, but a heavenly Father sending messages of kindness and mercy to His children. "Behold I bring you good tidings of great joy."

There has been in the last decade a wonderful progress in the unity and harmony of Christian people. In teaching the "glad tidings" to the nations sectarianism is buried and the Gospel told in its simplicity. Prejudice is weakening among races. Americans are no longer called "foreign devils" in China, but the Chinese take pride in their foreign friends and that great empire is establishing a constitutional government like our own and making Anglo-Saxon the court language. There is a deepening sense of brotherhood throughout the whole world wherever "Good-will to men" is proclaimed.

A third point in our star is

The Idea of a Gift

The Magi brought rich treasures, "the gold of royalty, the myrrh of humanity, the incense of divinity," but when they fell down and worshiped Him that was the greatest gift—they gave their hearts. So we, having learned a brotherly spirit, give gifts to each other at Christmastide. It is because God gave the greatest gift of heaven and earth to men—His Only Son. This gift was especially needed upon earth. He came as a Saviour—that is the meaning of the word Jesus, a Saviour. He was to save His people from their sins. This grows upon you as you know the world. Men are confused, bewildered, lost. The honest fair-minded man admits it. Some are like the overproud Indian who boasted that he never would get lost. But one day he missed the trail and failed to appear at nightfall. A band of braves started out in search and in the dawn of the morning found him wandering about helpless. But the moment the Indian saw his comrades he put on a bold front and grunted, "Ugh! Indian no lost, wigwam lost!"

Do not deceive yourself on this point. Every man is lost—somehow—somewhere! You will find yourself when you find Christ. A balloon race started north from St. Louis last October. The American II. was missing. There were all sorts of reports. "Balloon found—men lost!" People all over the country were interested and agitated lest those two men should perish in the Canadian forests. There was rejoicing when they were found safe. Men are lost in the jungles of sin, the whirlwind of temptation and grope in the darkness of sorrow. The guiding light, the protecting love, the comforting presence is Jesus, the Saviour of the World.

A fourth point is

Peace

The wonderful gift of God's love. Amid all the turmoil of life, the anxieties and burdens to be borne the thought that God reigns, that Christ loves and redeems will alone bring peace. Thou wilt keep him in perfect peace whose mind is stayed on Thee because he trusteth in Thee. Things contrary to our own wills make us rebel. Do you remember the experience of Gwen in "The Sky-Pilot?" She was a wild, wilful, brave child of the prairie. She was terribly hurt in her daring rescue of a ranchman. When she heard that she could never walk again her whole soul was in revolt. "I will walk again! I will have my own way!" Under the patient teaching of the sky-pilot she at last surrendered. A great peace came into her life and although always an invalid she became a ministering angel to the rough men of the foot-hills. Just to say in our disappointment and in our sorrow, "Thy will be done;" then the blessed star of peace will rise in our souls.

The fifth point is

Power

Who is sufficient, who can do these things? Who can bring men to their knees in worship? Who can create good-will among men? Who will or can give himself a Saviour of a world lost in sin? Who dares to say, "My peace I give unto you?" Who is the Power? The centuries give but one answer—the Son of God, the Messiah. Christ is the power unto salvation. That word power in the Greek testament is "dunamis," our word dynamite. Christ is the dynamite. I have in my possession a cylinder of smokeless powder. It was given me on board the battle-ship Missouri. The "Jacky" set it on fire and it burned with a harmless flame, a friend tried to cut it with a knife with little result. You might drop it on the floor and it would not explode. You could grind it to dust with a hammer and nothing would come of it. Where does it get its power? When you confine it in a cartridge, in its proper place, it will show tremendous force.

Friends, he that honors the Son honors the Father. Put the Son of God in His place of honor in your life and heart, and He will give you power to live through temptation and woe as a conqueror. He will be the dynamite of truth, righteousness and love to break up the rocks of pride and selfishness and to lay open our lives to the softening influences of His grace.

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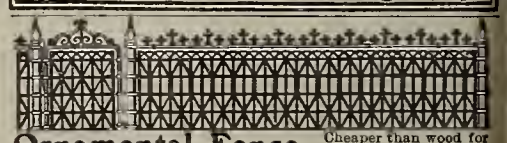

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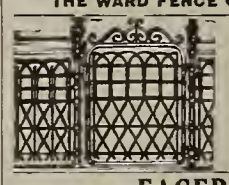

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EAGER TO WORK

Health Regained By Right Food

The average healthy man or woman is usually eager to be busy at some useful task or employment.

But let dyspepsia or indigestion get hold of one, and all endeavor becomes a burden.

"A year ago, after recovering from an operation," writes a Michigan lady, "my stomach and nerves began to give me much trouble.

"At times my appetite was voracious, but when indulged, indigestion followed. Other times I had no appetite whatever. The food I took did not nourish me and I grew weaker than ever.

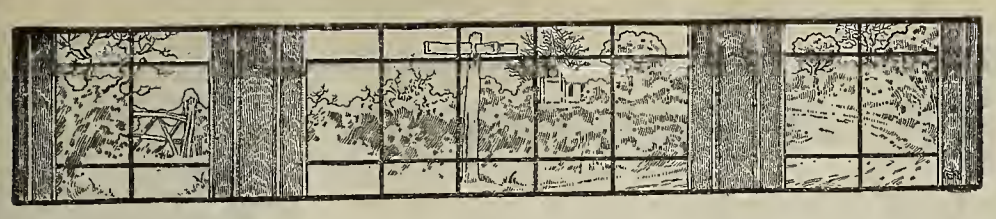
"I lost interest in everything and wanted to be alone. I had always had good nerves, but now the merest trifle would upset me and bring on a violent headache. Walking across the room was an effort and prescribed exercise was out of the question.

"I had seen Grape-Nuts advertised, but did not believe what I read at the time. At last when it seemed as if I was literally starving, I began to eat Grape-Nuts.

"I had not been able to work for a year, but now after two months on Grape-Nuts I am eager to be at work again. My stomach gives me no trouble now, my nerves are steady as ever, and interest in life and ambition have come back with the return to health."

Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.



A Country Church That Has Made Good

By M. B. McNutt

EDITOR'S NOTE—Is your church making good? If it is, well and good. If not, please think over these sentences taken from this, the last of this series of articles on the most successful rural church in America.

"One (special meeting) is held on New Year's Eve—planned brimful of good things for old and young—a brilliant affair. One is an all-day meeting at the close of the church year; good music and speaking, a banquet at noon—free to everybody." "When any one . . . has a birthday, he . . . deposits a . . . penny for each year he is old . . . to purchase books for the library." "Study courses will be conducted in scientific agriculture, domestic science, animal husbandry, sociology."

The secret of success seems to be to make the church really "rural," and to use brains.

* * *

Chapter IV.

HAVE you ever seen the work of the country church running along on a dead level? Yes, you have. Well, let me give you a remedy. We of the Du Page church call them *inspirational meetings*. Only two a year are held for the whole church. One on New Year's Eve when everybody comes to watch the old year die and to welcome in the new. This is no common watch-meeting. The evening is planned brimful of good things for old and young and it is a brilliant affair. The other is held at the close of the church year. This is a grand "round-up" of the year's work. It is an all-day meeting. The women serve a banquet at noon—free to everybody. It is a day of fellowship and sociability, good music and speaking. We usually have two or three good speakers from outside. There is always a church full of people on both these occasions and it requires very little effort to get them there. Such meetings are a mighty uplift to a community and the dead level gait receives a jolt.

Similar inspirational meetings are planned for the various organizations in the church—sometimes two working together. A year ago we had a great rally in the young men's Bible class attended by one hundred young men.

When any one in the Sunday-school has a birthday he walks up to the superintendent's desk and deposits in a little box for the purpose—a penny for each year he is old. This fund is used to purchase books for the library, which now has over a thousand volumes. It is planned, also, to put in a line of reference books. From time to time various study courses will be conducted in scientific agriculture, domestic science, animal husbandry, civil government and sociology. It is not the purpose of the church to become a knowledge-imparting institution, but rather to create an atmosphere of research in the community; to foster the spirit of inquiry and investigation of truth, and to afford occasion and opportunity for such investigation.

Country folk have an idea that the young people must go away from home to get an education. And when they get it they are done with the country as a rule. This is because the education they get away at college does not prepare them for life in the country. (I believe in colleges.) So many young people imagine that the prizes are all in the city—anywhere else but on the farm. This country church is trying to teach the country folks the possibilities of country life. It is endeavoring to lead the ninety-nine out of a hundred country boys and girls that never get more than a common school education—hardly that—into habits of study and research. It is wonderful what these young people can work out for themselves in the way of studying when you once get them started.

The effect of this work on the community has been to decrease the tendency to move to town. And farms in this parish are at a premium. Not simply because it is a good farming territory, but because it is a good place to live and rear a family. Many people outside of the parish have said to me and to members of the church, "How I wish we lived nearer to your church." A farmer here said to me not long ago, "The farm I have does not suit me and I would move away were it not for leaving this church." And this is the spirit that prevails in the community.

This church has won the confidence and the hearty support of the people of the community. The best test of all is the character she is producing in her young people. This is the one thing above all others that attracts the attention of strangers who come in touch with the work. Every one is amazed at the great number of young people we have in our church—and such fine, capable Christian young men and women they are!

No sane man would attempt to introduce into another country church these identical methods. He would no doubt fail if he did. Each country pastor, with his people, should study the peculiar needs and conditions of their community and then devise or adopt methods to correspond. Every church must work out for itself its own problems.

But while methods may vary to suit conditions principles remain the same. The country church of to-day needs to be a ministering church. Let it be many sided. Make it minister to the *whole* man rather than to his spiritual nature only. Make it to serve the whole community rather than a particular body in the community, the aim being, not to make Presbyterians or Methodists or Baptists or Catholics, but to create an atmosphere in the community that will help Presbyterians to better Presbyterians, Methodists better Methodists, Catholics better Catholics and all better men and women. An atmosphere to live in which will inspire to higher thinking and nobler living. Let the church be all things to all men to save them. Let it teach men that honest toil is sacred; that innocent amusement is holy and that these are ways of glorifying and praising God as well as the Sunday devotions. Give abundant opportunity for the expression of Christian life in practical every-day service. Let the church help to discover to men their talents and then aid them in the development of them. Distribute responsibilities as widely as capacity for efficient service will warrant. Lead everybody into doing something useful for somebody else. Make it easy for men to do right and as hard as possible for them to do wrong. Let there be as much preaching of the Gospel as ever and more. "The Gospel of Christ is still the power of God unto salvation to all them that believe," but let there be more practising, more of the spirit of the Master in ministering to men. Train the children carefully and teach them to know and to love the country. These are the principles we have been endeavoring to follow. A faithful and common-sense application of them in any country church will bring success.

[THE END]

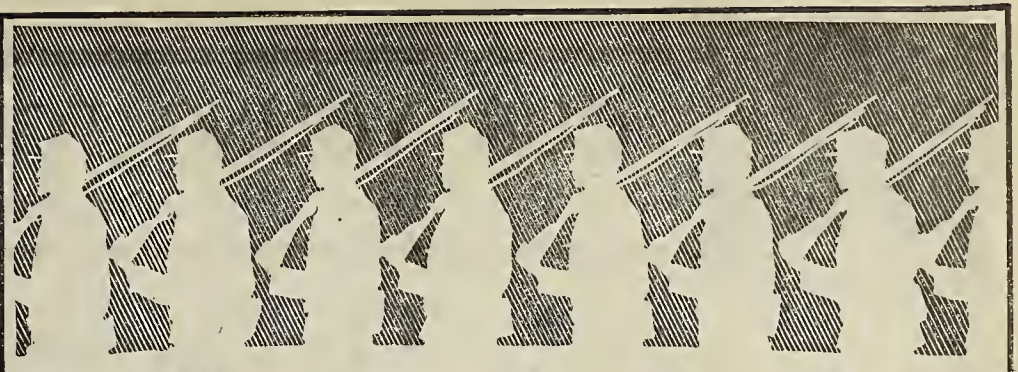
Church Social Affairs

A Potato Supper—One church committee that did not feel justified in spending a large sum on their social evening taxed every one a very small amount and with the fund thus raised got up a potato supper that made a hit. There were baked surprise potatoes that contained beef croquettes, but everything else was confined to potatoes proper with results in the way of variety that were quite remarkable. With the surprise praties went French-fried strips and there were, besides, potato-biscuits, potato-salad, potato griddle-cakes. The dessert was sweet-potato pie and coffee. Try this the next time you are puzzled for a good idea and see if it is not a success.

A Baby Show — The young people of both sexes are asked to bring photographs of themselves as infants. As players arrive the photographs are collected and each is ticketed with a number, after which it is placed on an easel where it can be plainly seen. During the first half-hour guests view the photos and write down the names of those whose pictures they suppose them to be identified with the numbers of the photographs as "Miss Edgewine—No. 5."

The one guessing most names correctly could win a pretty photograph-frame

Later on take a vote on the prettiest, and give the two people whose infantile aspects receive most ballots, prizes of dolls.



Who Was There That *You* Knew?

IN the shadowy ranks of those who marched to defeat or death or victory in the mighty conflict that convulsed this great nation fifty years ago, is there father or grandfather or uncle of yours? Would you like to see a photograph of his in that long ago day of his youth—a photograph that he never knew was taken? Perhaps we can show you one; and in any case, we can tell you a story stranger than any detective fiction, of 3,500 priceless photographs that were lost and were found again.

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OUR YOUNG FOLKS' DEPARTMENT

Conducted By Cousin Sally

The Little Frost Fays

By Fannie Medbury Pendleton

IT WAS a fine frosty morning two days before Christmas, and the little pond in the hills was smooth and glassy. The fir trees on the snowy hillside stood straight and waved their green arms as though they said, "Come and take us. Hang your gifts and garlands upon our branches, for Christmas is come and we would be merry, too."

But Jimmy was so very busy putting on his skates that he did not notice the little fir trees, nor did he hear the wind which said, "It is cold-old-old," nor the ice which said, "I am strong, but watch out for thin edges, little boy."

As he stood up on his shining skates, he wished that Jack could have come, too. He would tell Jack what a fine time he had missed and how smooth the ice was.

With quick strokes, Jimmy started up the pond, while his skates made a clear, ringing sound on the ice. On he went, while the wind whistled by. He could never remember a time before when the whole pond had been frozen; even the stream which led under the bridge was a sheet of ice, and the dark branches of the trees met overhead and dropped their powdered snow upon his shoulders as he flew by. Then, above his head, loomed the shadow of the bridge.

"Hello, there!"

Jimmy looked about on every side, but there was no one in sight.

"Hello! Hello, Jimmy!" The cry seemed to come from the dark bridge, from behind the trees and rocks, even from under the ice itself. Jimmy stopped in surprise.

"Hello, yourself," he called back bravely, although his heart was beating rapidly.

"Ha, Ha, Ha," and the ringing echoes took up the cry and tossed it on and on, until it was lost among the hills.

"Where are you?" called Jimmy.

"Here and here and here!" The answers came from all sides.

Jimmy's knees began to shake, but he would not show that he was afraid, so he cried, "Come out into plain sight."

Instantly, from behind every bush and tree and rock, from the bridge and almost from the air itself, appeared hundreds of tiny elves. They were clad in white fur suits trimmed with silver, and they wore pointed silver caps and tiny skates or snowshoes. They gathered about Jimmy, who was so surprised that he didn't know what to say. Then one tiny man stepped forward.

"A hearty welcome, Jimmy," he said, bowing low, "to the Land of the Frost Fays. Come along with us and we will teach you winter wonders, little boy."

They led him straight toward the hillside, where there was a small ice-hung opening, and the Frost Fay touched him with his silver wand, until he grew smaller and smaller, until he was just the size of a Frost Fay himself, and that, of course, was not big at all.

On they went into the crystal cave, which was quite light, for the walls flashed like jewels, and the floor was carpeted with soft snow.

Now they entered a wonderful room where many Frost Fays were busy carving lovely snow crystals and turning drops of water into diamonds of ice to hang on the trees and bushes. There was a small army of them at work under the pond, making the ice strong and mending it where it had cracked. Every one was busy, and indeed there was much to do, for, as they told Jimmy, North Wind had come two days before with a message from King Winter, who said that it must be a white Christmas; and, as every one knows, there was very little time indeed to carry out an order like that.

There was no end of big icicles to carve into beautiful shapes, and yet they must be so clear, that when the sun shone on them they would flash with all the colors of the rainbow. And there were ever so many little streams to cover up with blankets of ice, and the fir trees were just suffering for mantles of fleecy snow.

They showed the little boy blocks of ice frozen about a delicate fern leaf and great drifts of snow in the hollows; and Jimmy watched the tiny men and asked them to fix the roads so that it would be good sleighing for Christmas.

Suddenly, down the cave, came such a blast of cold air that he was almost frozen.

"Whoooooooooooooooo—"

In a moment there swept into sight an old man in a robe of snow and ice. His white hair and beard streamed behind him, and now the elves worked harder than ever. It was King Winter himself, and he had come to make sure that his orders were being obeyed.

"Hello!" King Winter stopped and looked at Jimmy, whose teeth began to chatter with cold. The old man laughed.

"A Merry Christmas, Earth Child," he said. "I am rather old-fashioned, and I believe in ice and snow this time of year, although South Wind and the Rain King interfere with me sometimes. I'll have my way this time, never fear." And with a chuckle King Winter was gone.

Jimmy remembered that he leaned on an oaken staff and that a spray of holly had caught in his long white beard.

It was time for Jimmy to go, so the Frost Fays filled his hands with ice diamonds and took him back to the bridge.

"Remember, Jimmy," they told him, "when we pinch you and stick pins into you, it is high time to skip about and get warm. You may not see us, but we do it for your good, or the North Wind, who is just waiting for a chance, would certainly nip you. Remember, now!"

Just then a blast from North Wind's trumpet struck Jimmy's face, and he closed his eyes.

When he opened them, he was sitting under the bridge, the ice diamonds had melted on his red mittens, and, though he could no longer see them, he was sure that every Frost Fay in the world was trying to pinch him black and blue.

"Whewewewewew!" North Wind was surely coming, and it was time to start for home, so Jimmy moved his numb limbs as fast as he could, and, after a little while, the Frost Fays stopped pinching.

He took off his skates, and as he turned away from the pond and called "Good-by," he was quite sure that the Frost Fays answered him back from every side.

Under the Holly Bough

By Gertrude Crownfield

"I DON'T see how it can possibly be done, Martha."

"Oh, yes, it can, mother dear, and it must. You know you can not get along without your eyes, and the doctor says that the only way to save them is to go and have the operation. It's so good of him to manage things in such a way that it won't cost us anything besides your fare to Jackson."

"That part is not what troubles me, dear. The real thing is leaving you here all alone with Billy."

"Nonsense, mother. I'm almost a woman, and Billy will be such company, I can't be lonesome; though, of course, I'll miss you whole heaps." And thirteen-year-old Martha touched her mother's hair lovingly, as she stood by her chair. "You know," she continued, "that your eyes won't let you see the figures any longer, if you don't say yes. So say it, mother, and you'll find, when you come home again, that I've been a good little housekeeper, and Billy-keeper, too. Please say you'll go!"

"Perhaps, then, you had better take the note to Doctor Bartlett at once," said Mrs. Aken with a sigh, as she drew her writing-materials toward her. Since the loss of income that had followed her husband's death, she had been obliged to accept a position as bookkeeper in the principal store in the village. An unusual amount of strain upon her eyes and a sudden cold which had settled in them had set up an inflammation of the iris, which could only be relieved by an operation in a hospital, where she could receive the necessary care.

The decision having been made, her few preparations were soon completed, and the next morning Martha turned away from the station, as the train that bore her mother and Doctor Bartlett to Jackson puffed away in the distance. A thick mist dimmed her eyes for a moment, but she took Baby Billy bravely by the hand and walked down the road.

"Gracious, what holly they have down here! There's solid money in it, if somebody'd just ship a little of it up to our part of the country."

"That's a fact. Box-loads of it would go off like hot cakes. Just cut it in big sprigs and sprays, tie it in bunches, distribute it among the shops up North and it would sell tremendously. It's a wonder some one don't make a business of it."

The two gentlemen who had spoken passed on. Martha stood stock-still in the road. On every side and above her head the holly, thick with scarlet berries, glistened dark green in the winter sunshine. Several minutes passed, but still she stood and thought. Billy tugged at her hand. No response.

"Marfa tum. Take Billy home."

Still no reply. A very much astonished little chap looked up and finally puckered up his face to cry. At the first wail Martha wakened to his needs, and tossing him up on her shoulder, hurried off down the road, her eyes bright with the idea that had been so unexpectedly suggested to her.

That afternoon she trotted from merchants to station-master, asking questions, jotting down replies and making lists of names and addresses in Northern cities given her by her business friends. Everywhere she found men interested in her venture, and everywhere she received practical and helpful suggestions. Baby Billy had such an outing in his little soap-box cart as caused him much surprise and huge enjoyment.

Waiting for Santa Claus

That night many letters of inquiry, carefully written in a girlish hand, were sent North, and when the answers came, Martha found that the days were likely to be very full of holly-gathering.

A week went by, and a dozen or more big boxes had been shipped to her customers. She had become so busy that it was necessary to engage a sturdy darky lad to assist and do the gathering. For the first day or two Billy and she had gone to the thickets together, but after that her time was occupied in tying and packing the holly, when she had made it into handsome bunches.

And then, when the first lot was disposed of, came inquiries from other merchants. Business began to hum. Billy was fed and tended faithfully, and was guarded from holly prickles in his soap-box, while Martha worked close by.

Messages came and went at regular intervals between the little brown cottage and the hospital, but not a word was said about the holly. Martha must have been the most tired but happiest girl in all the South on the day before Christmas, as she took Billy to the station to meet her mother.

"Oh, mother, how good it is to see you and know that you're going to have brand new eyes," whispered she, as she kissed Mrs. Aken tenderly.

"How glad I am to see my Billikins well and jolly; but I think my big daughter looks thin and pale with all her housekeeping cares." The mother scanned the young face as she spoke.

"Never mind, mammy dear. It was in such a good cause. You won't have to do a thing but rest and let your eyes get all strong and steady. Come in and sit in the big chair while I tell you."

Martha drew her mother across the door-sill, and seated her in the armchair by the window. A moment more and a shower of bills and coins fell in her lap. She looked up in extreme astonishment, gasping, "Where in the world did it come from, Martha?" when the faithful young home-keeper threw her arms around her mother with a little sob of joy and cried: "I found it under the holly bough, mother dearest."

PATTERNS FOR HOLIDAY CLOTHES FOR DEAREST DOLLY

MISS GOULD PLANS A CHRISTMAS PRESENT WHICH WILL DELIGHT EVERY LITTLE GIRL

OF COURSE, you dear mothers have already started to think ever so hard of Christmas. Perhaps your little daughter has been begging you to help her write that most important letter of all the year—the letter telling Santa Claus just what she wants for Christmas. And perhaps from his far-away home Santa Claus himself has been sending you wireless messages of what he is planning to do.

Now though some of these wireless messages from dear old Saint Nick have been coming to me, yet I have been wanting to have a part (and a helpful part) in all the coming Christmas festivities. This is one reason why I have thought of a little Christmas gift, a very inexpensive, but a very nice one, which perhaps some mothers will be glad to know about and glad to tuck away in the toe of her little daughter's Christmas stocking.

Of course, every little girl who has been writing letters to Santa Claus has a Dearest Dolly. And naturally anything that will make Dearest Dolly happy, and incidentally more beautiful, will make little daughter happy, too. So I have been thinking out, designing I should say, some very lovely new clothes for Dearest Dolly. Little daughter is sure to like them because it is going to make her feel so very grown up to be able to make her own Dearest Dolly's clothes and to use nice paper patterns, all lettered and notched, just like mother uses when she is making her clothes.

The little patterns are to be tucked away in a most attractive envelope, which is decorated with a picture that perhaps looks like Dearest Dolly, and below it is a little verse. Every little girl who is fortunate enough to receive on Christmas Morning the Dearest Dolly patterns can make the clothes with just a little help from mother.

Not knowing just how tall or how short Dearest Dolly may be, the sets of patterns are cut in three sizes for dolls 14, 18 and 22 inches high. This attractive little Christmas gift of doll's patterns costs but ten cents. In ordering the Dearest Dolly patterns, write to the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City.

The pattern envelope contains nineteen pieces. Ten of these pieces belong to the dress and are lettered as follows: The front V, the back T, the yoke Y, the collar E, the belt A, the puff sleeve K, the cap sleeve F, the armband J, the skirt E and the tunic H. The six pieces for the coat are lettered as follows: The front yoke I, the back yoke M, the coat N, the collar Z, the sleeve W and the cuff X. Then there are two pieces for the petticoat: The waist and the skirt and one piece for the drawers.

The letters are perforated through each piece of the dress and coat patterns in order to identify the parts. There are many tiny pieces in this pattern and our method of lettering will be useful to any one in selecting the pieces for cutting out the different patterns.

Smooth all the wrinkles from the tissue before placing the pattern on the material. In cutting, lay the edges marked by triple crosses (XXX) on a lengthwise fold of the material. Place the other parts of the pattern with the line of large round perforations in each lengthwise of the goods.

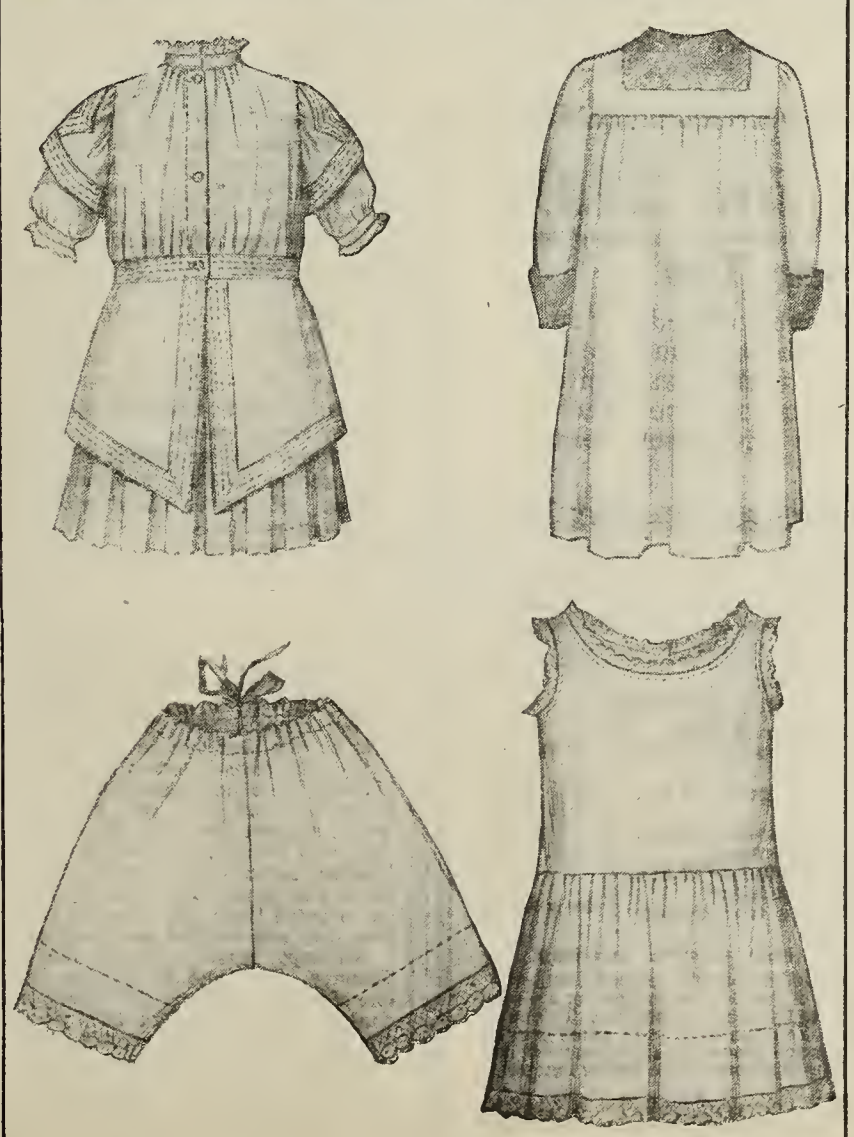
Mark all perforations carefully and see that each notch is cut out before removing pattern pieces from material.

To Make the Dress

Join the pieces by corresponding notches. Lap the fronts, matching center lines of large round perforations, and stitch the point of the right front firmly to position on the left front. Turn in the neck edges of the fronts three eighths of an inch and arrange on the yoke, bringing these edges to the line of perforations on the yoke.

No. 1654—Dearest Dolly's Christmas Clothes

Pattern cut for dolls 14, 18 and 22 inches high. Quantity of material required for the dress in this set of doll's clothes, for medium size, or 18 inches high, one yard of twenty-seven-inch material, with one half yard of lawn for yoke and undersleeves. For the coat, five eighths of a yard of twenty-seven-inch material, with one fourth of a yard of velvet for collar and cuffs. For the drawers, one fourth of a yard of twenty-seven-inch material, with one half yard of lace. For the petticoat, one half yard of twenty-seven-inch material, with two yards of lace. The price of this set of doll's patterns is ten cents. It may be ordered from the Pattern Department, Farm and Fireside, 11 East 24th Street, New York City



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Turn hems on the backs of waist by notches. Gather the backs at neck between double crosses. Join the collar to the neck by notch.

Gather the waist at lower edge between double crosses. Join the belt to the lower edge of the waist as notched. Match the centers of the waist and belt, back and front, and bring the large round perforations at the sides of the belt to the under-arm seams.

Gather the puff sleeve at upper and lower edges between the double crosses. Join the armband to the lower edge of the sleeve as notched.

Gather the cap sleeve at upper edge between double crosses and arrange over the puff sleeve, matching upper edges and notches.

Even in a little dress of this description you must follow some of the rules that are made for grown folks' clothes. One of these rules is: Always hold the sleeve toward you when arranging it in the arms-eye. With the sleeve in this position, place the seam in the sleeve at the under-arm seam in the waist and bring the notch in the top of the sleeve to the shoulder seam. Pin first at these two points. Then pin the plain part of the sleeve smoothly in the arms-eye. Draw up the gathers closely to fit the remaining space. Distribute the fullness evenly and pin very carefully before basting in the sleeve.

The arranging of the sleeve in the arms-eye is never easy to do, but it is particularly tedious in a doll's dress where the arms-eye is very small and the sleeve is double. Take plenty of time and do not stretch the armhole nor draw your bastings too tightly.

Close the back seam of the skirt as far as the notch. Finish the opening above the notch for a placket. Turn a one-inch hem on the skirt by the line of large round perforations.

Form the box-plaits in the skirt by bringing the corresponding lines of triangle perforations together. Baste on these lines. Then open each box-plait out flat with the seam at the center of the plait on the under side. Baste first and press well. Leave the bastings in these plaits until you have given the dress the final pressing.

Lap the fronts of the tunic, matching the center lines of large round perforations, and stitch the right side to position. Arrange tunic over plaited skirt, matching upper edges. Join skirt and tunic to lower edge of belt as notched.

Lap the backs of the waist, matching the center lines of large round perforations, and button.

Finish the edges of waist fronts, sleeves and tunic with stitched bands of material or flat braid. Apply the same trimming on the cap sleeves along lines of small round perforations. Finish neck edges and armbands with lace frills. This completes the making of the dress.

To Make the Coat

Join the pieces as notched. Turn hems on fronts by notches. Gather coat at upper edge between double crosses and join to the lower edge of the yoke as notched. Join the collar to neck by notch. Turn a one-and-one-half-inch hem on the coat by the line of large round perforations.

Join the cuff to the lower edge of the sleeve as notched. Gather the sleeve at the upper edge between double crosses. Pin in the arms-eye, placing the seam in the sleeve at notch under the arm and the top notch in the sleeve at the shoulder seam. Then baste securely, following closely the directions given for sewing the dress sleeve in the arms-eye.

Fasten the coat with a hook and eye at the point of the collar.

The making of the simple little petticoat and drawers is very clearly described on the slip in the pattern envelope. Dearest Dolly's lingerie set would look its daintiest made of white lawn, trimmed with narrow Val. lace.

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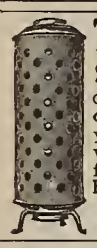

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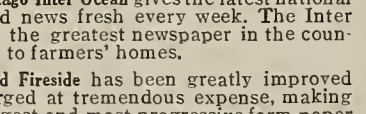

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Recipes Contributed By Readers

New Kind of Icing—A delicious icing may be made by wetting granulated sugar with just enough milk to allow it to boil. Let it boil just a minute; then remove from the fire and beat until perfectly cold. Flavor with vanilla. It will be creamy and just the right thickness to spread on cake. When iced allow it to stand a few minutes, then spread thinly with unsweetened chocolate that has been melted in a dish over the tea-kettle.
G. F., Wisconsin.

Scalloped Rice—Wash one half pint of rice. Boil twenty minutes in salted water and drain. Rub together two tablespoonfuls of butter and two tablespoonfuls of flour, add one half pint of milk, stir until boiling, season with one half teaspoonful of salt and a pinch of pepper. Grate one half pound of cheese and stir into the sauce. Put layer of rice in baking-dish, then sauce, one of rice, etc., until all is used. Dust with bread-crumbs and bake in a quick oven twenty minutes. Serve in baking-dish. This will take the place of meat and potatoes, forming the main dish of the meal. MRS. L. A., Illinois.

Sweet-Potato Biscuit—Two cupfuls of flour, two cupfuls of mashed sweet potatoes which have previously been boiled with the skins on, one teaspoonful of salt, one teaspoonful of sugar, one teaspoonful of soda, one teaspoonful of baking-powder, one heaping tablespoonful of lard. Mix all well, then add enough buttermilk to make stiff enough to roll. Cut with biscuit-cutter and bake in hot oven. Delicious eaten hot with butter.
MRS. S. H. S., North Carolina.

Sweet-Potato Pudding—One cupful of sugar, one egg, one tablespoonful of butter, one teaspoonful of soda dissolved in one pint of fresh buttermilk, salt to taste and enough boiled mashed sweet potatoes to make a stiff batter. Flavor with nutmeg or lemon. Bake in a deep pan. It is light and nice.
A. O., Alabama.

Stuffed Apples—Hollow out the cores of good baking apples. Stuff with chopped dates, nuts and figs, then bake. Serve with whipped cream. These make a most delicious dessert served with lady-fingers.
G. S., New Jersey.

Pancakes—These may be made without having to grease the griddle. One half cupful of sour cream, the yolks of three eggs, two cupfuls of sweet or sour milk. Add to this two cupfuls of flour to which has been added one teaspoonful of soda (one half teaspoonful if sweet milk is used), one large teaspoonful of salt, one tablespoonful of sugar, sift into liquids and lastly add the beaten whites of the eggs. Bake on griddle not too hot for the first cake, and you'll have no trouble with them sticking and your house will be free from the smoke generally made by frying cakes.

By adding a tablespoonful of melted butter to this recipe delicious and crisp waffles can be made and can be baked without the use of the buttered iron.
MRS. E. L. H., South Dakota.

Economical Fruit-Pudding—This is easily and quickly made. The fruit may be fresh, canned or dried. Boil until tender and sweeten to taste. Have it well covered with water. Put into a bowl one cupful of flour, one teaspoonful of baking-powder, one fourth of a teaspoonful of salt, one tablespoonful of sugar; mix and stir in enough sweet milk to make a rather stiff batter. If too thin it will not keep its shape; if too thick, it will not be light and tender. Beat smooth and drop by spoonfuls over the boiling fruit. Cover at once, draw the pan back on the heat where it will boil gently. On no account lift the lid until it has cooked for fifteen minutes. Place the dumplings in a circle on a platter and pour the fruit in the center. Serve hot with any sauce preferred.
A. M. J., Pennsylvania.

To Use Left-Overs—For scalloped roast beef, on the bottom of your baking-dish put a layer of sliced raw onions, a layer of canned tomatoes, then a layer of cold roast beef cut into very small pieces. Fill the dish in this order, seasoning with salt and pepper and a little of the beef-stock or gravy. On the top place a layer of bread-crumbs and bake forty minutes.

Cut whatever vegetables you have left over into dice, heat in butter and a little stock or hot water, season with salt and pepper. When cooked turn it over your omelet before folding it. MRS. E. M., Indiana.

Christmas Fruit-Cake—One cupful of sugar, one cupful of shortening, one cupful of molasses, one cupful of boiling water, one cupful of raisins, one cupful of currants, one teaspoonful each of lemon, vanilla, nutmeg, cinnamon, cloves and allspice. One rounding teaspoonful of soda, pinch of salt, four cupfuls of flour. This makes two cakes.
MRS. G. W., New York.

Vanilla-Wafers—These wafers are like those you buy: Cream one cupful of butter with two cupfuls of sugar, add three well-beaten eggs and vanilla to taste. Stir in just enough flour to make a soft dough that will roll. Roll very thin, cut into rounds and bake in hot oven. MRS. W. S., Illinois.

A New Way to Cook Oatmeal—I prepare it in the evening while getting supper. Place the usual amount of oatmeal in a deep pudding-pan and add four times as much milk as you do meal, a little salt, and sugar to taste, and a bit of cinnamon, if liked. Mix and bake one hour. A longer time may be required if a larger quantity of oatmeal is cooked. Do not let it get too dry. Add more milk if needed. Next morning place in oven again and warm through—then serve. MRS. M. A., Washington.

Apple-Butter—Three gallons of cooked apples, one quart of cider-vinegar (if too strong, weaken with water) and nine pounds of light brown sugar. Boil this down to about two gallons and season with cinnamon to taste. MRS. W. C. K., Oklahoma.

Cream-Pie—One generous cupful of milk, two eggs, one half cupful of sugar, a piece of butter the size of a walnut, one tablespoonful of corn-starch. Bake the same as a custard-pie, using the yolks of the eggs for the custard. Spread the beaten whites over the top and brown.
MRS. A. L., Pennsylvania.

Aunt Mary's Cake—One half cupful of shortening, one cupful of sugar, one cupful of apple-sauce, one teaspoonful of soda dissolved in sauce, one cupful of raisins, one teaspoonful of cinnamon, cloves and some nutmeg, one and three fourths of a cupful of flour. Mix well and bake in a moderate oven. MRS. L. V. W. C., New Jersey.

German Coffee Cake—One and one half cupfuls of sugar and one tablespoonful of butter or lard creamed together. Two eggs well beaten, one and one half cupfuls of sweet milk, three cupfuls of flour, one and one half teaspoonfuls of baking-powder. Sift the flour and baking-powder two or three times, add a cupful of seeded raisins and currants floured, bake in a shallow bread-pan. Sprinkle sugar and cinnamon over the top just before baking.
MRS. G. A. H., Oklahoma.

Baked Hash—One cupful of finely chopped beef, two cupfuls of boiled rice, half a cupful of bread-crumbs, two cupfuls of stewed tomatoes. Season with salt, pepper and butter, mix well and bake in a greased pan for half an hour in a moderate oven.
N. R., Connecticut.

Stuffed Peppers With Rice—Select six medium-sized green peppers, cut the top off and set aside for use later. Remove all the seeds from the inside of the peppers.

Fill these with rice previously boiled and which has been mixed with a little cold ham finely chopped, cold tongue, chicken or any left-over meat. Flavor with a little butter, pepper and salt.

Place the top back on each pepper, take a strip of bacon and tie it across the pepper, fastening it with a small skewer or toothpick. Bake in a steady oven until the peppers are quite soft.

Cranberry-Dumplings—Make a very rich biscuit dough and roll it out thin, spread thickly with cranberries, chopped and mixed with plenty of sugar to sweeten, dust with grated nutmeg, and roll the dough up closely, pinch the ends tightly together and steam for one hour. Cut in slices across the roll and serve with any preferred pudding sauce.

Cranberry-Shortcake—Make a soft dough as for any shortcake and bake in two shallow tins. To one cupful of the cranberries add one half cupful of raisins, both slightly chopped, and one half cupful of water. Cook until soft, then stir in one cupful of sugar and one tablespoonful of corn-starch dissolved in a little cold water. When done, flavor with vanilla, and beat well, when cool spread on the cake. E. I. L., Wisconsin.

EDITOR'S NOTE—Monthly we give prizes of $2.00 for the two best descriptions (with rough sketch) of an original home-made household convenience or labor-saving device, and $1.00 for the third best or any that can be used.

We also give 25 cents each for helpful kitchen hints and suggestions, also good tested recipes that can be used. We would suggest that you do not send more than two recipes, and not more than five kitchen hints each month, because we receive so many that space will not allow us to print them all, in spite of the fact that they are reliable and practical.

All copy must be in by the tenth of January, and must be written in ink on one side of the paper. Manuscripts should contain not more than 250 words. We would suggest that contributors retain duplicate copy, as no manuscripts will be returned. The mail is so heavy that it is impossible for us to acknowledge receipt of manuscripts. Address "Housewife's Club," FARM AND FIRESIDE, Springfield, Ohio.

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Christmas Goodies

Delicious Cakes and Candies

Mistletoe Morsels—Beat two eggs to a froth and cream with one half pound of powdered sugar, add two tablespoonfuls of cream, one half pound of butter washed free from salt and four cupfuls of flour. Roll thin and cut in preferred shapes. For the frosting take one half pound of powdered sugar and one pint of grated cocoanut and add the whites of three eggs beaten to a froth. Mix smoothly, spread a spoonful on each cooky and bake in a moderate oven.

Holiday Hermits—Cream one and one half cupfuls of granulated sugar with one cupful of butter, add three well-beaten eggs, two tablespoonfuls of milk, a scant teaspoonful of soda dissolved in a tablespoonful of warm water, one teaspoonful of cinnamon, one half teaspoonful of cloves, two and one half cupfuls of sifted flour, one cupful of chopped raisins, one cupful of chopped English walnuts, two tablespoonfuls of finely shredded citron. Mold in balls the size of a walnut, flatten slightly, place in buttered pans and bake in a slow oven.

Stretched Molasses-Candy—An old-fashioned sweet: Put one cupful of Porto Rico molasses, three cupfuls of sugar, one cupful of boiling water, and three teaspoonfuls of vinegar into a Scotch kettle or smooth granitewarc saucepan. Bring to the boiling-point and add one half of a teaspoonful of cream of tartar. Boil until the mixture will become brittle when tried in cold water. Stir constantly during the last part of the cooking, and when nearly done add one half of a cupful of melted butter and one fourth of a teaspoonful of soda. Pour into a buttered pan. When cool enough to handle, pull until very light in color, allowing candy to come in contact with tips of fingers and thumbs, not to be squeezed in the hand. Cut in small pieces, using large shears or a sharp knife, and arrange on slightly buttered plates to cool. While pulling add one teaspoonful of vanilla, one half teaspoonful of lemon extract, a few drops of oil of peppermint or wintergreen.

Fruit-Gems—Cream one cupful of brown sugar with one half cupful of butter, add one beaten egg, one cupful of sour milk in which one teaspoonful of soda has been dissolved, two teaspoonfuls of cocoa, one teaspoonful of cinnamon, one half teaspoonful of allspice, two cupfuls of sifted flour, one cupful of chopped seeded raisins, one half cupful of currants. Bake in gem-pans and ice with maple or chocolate icing.

Chocolate Nut-Sticks—First mix carefully together one cupful of fine granulated sugar, one fourth of a cupful of melted butter, one unbeaten egg, two squares unsweetened chocolate (melted), three fourths of a teaspoonful of vanilla, one half of a cupful of flour and one half of a cupful of English-walnut meats cut in pieces. Line a seven-inch-square pan with paraffin paper and spread mixture evenly in pan. Bake in a slow oven. As soon as removed from oven turn from pan and remove paper; then cut cake in strips, using a long sharp knife. If these directions are not followed the paper will cling to cake when it will be impossible to cut it in shapely pieces.

Pop-Corn Balls—One cupful of sugar, one fourth cupful of molasses, two tablespoonfuls of vinegar, one fourth teaspoonful of butter, a pinch of salt. Boil this until it candies and then pour over the popped corn and stir until well mixed. When cooled off a little mold into balls.

Vermont Maple Cookies—Cream two tablespoonfuls of butter with one half cupful of maple syrup; add one egg, two tablespoonfuls of milk, one rounding cupful of flour sifted with one half teaspoonful of cream of tartar and one fourth of a teaspoonful of soda, three fourths of a cupful of chopped hickory-nuts. Drop from a spoon into buttered pans, leaving enough space between to prevent running together.

Peppermints—One and one half cupfuls of sugar, one half cupful of boiling water and six drops of oil of peppermint.

Put sugar and water into a granite saucepan and stir until sugar is dissolved. Boil ten minutes; remove from fire, add peppermint and beat until of right consistency. Drop from tip of spoon on slightly buttered paper.

Glacé Nuts—Put two cupfuls of granulated sugar, one cupful of boiling water and one eighth of a teaspoonful of cream of tartar in a smooth graniteware saucepan. Stir, place on range, and heat to the boiling-point. Boil, without stirring, until the syrup begins to discolor slightly. After a few minutes' boiling, the sugar will adhere to the sides of the pan; this should be washed off with the hand, first dipped in cold water, a process not so difficult as it may appear. Have a pan of cold water near at hand, dip the hand in cold water, then quickly wash off a small part of the sugar with the tips of the fingers, and repeat until all the sugar adhering to the sides of saucepan is removed. Remove saucepan from fire, and place in a larger pan of cold water to instantly stop the boiling. Remove from cold water and place in a saucepan of hot water during the dipping. Take nuts separately on a long pin, dip in syrup to cover, remove from syrup, place on oiled paper.

Philadelphia Caramels—For this confection put four tablespoonfuls of butter into kettle, and when melted add too cupfuls of Porto Rico molasses, one cupful of brown sugar, and one third of a cupful of milk. Stir until mixed, bring to the boiling-point, and add four and one half squares of unsweetened chocolate, stirring constantly until chocolate is melted. Boil until, when tried in cold water, a firm ball may be formed in the fingers. Remove from fire, add two teaspoonfuls of vanilla and one cupful of English-walnut meats broken in pieces. Turn into a buttered pan, cool slightly, and mark in small squares. When nearly cold cut into cubes.

Stuffed Dates—Shell and remove meats from Brazilian nuts, leaving them whole as far as possible, and with a small sharp knife cut off the brown skin. Make a cut the entire length of the dates and remove the stones. Fill cavities with the Brazilian-nut meats, and shape in original form. Roll in granulated sugar and pile in rows on a small plate covered with a doily.

Delicious Nut-Cake—Beat to a cream one cupful of granulated sugar, one tablespoonful of butter and lard, add the beaten yolks of two eggs, flavor with lemon; then add two cupfuls of flour, two teaspoonfuls of baking-powder, the whites of eggs and one cupful of water. Beat well, then add a cupful of hickory-nuts. Bake in a moderate oven.

Fedora Figs—Steam best quality bag figs until soft. Cool and make an incision in each lengthwise and stuff with one half of a marshmallow and an English-walnut meat broken in pieces. Close figs and serve.

Cream Fudge—One and one half cupfuls of granulated sugar and half a cupful of rich milk. Let stand on slow fire until dissolved, then let boil hard for ten minutes. Beat until creamy and add flavoring to taste. A small teaspoonful of vanilla makes it very palatable. If desired, chopped nuts may be added. This is delicious.

Ice-Cream Cake—The whites of three eggs, one cupful of sugar, one half cupful of butter, one half cupful of milk, two cupfuls of flour, one heaping teaspoonful of baking-powder and one half teaspoonful of vanilla. Bake in layers.

ICING—The yolks of three eggs, one cupful of powdered sugar and one teaspoonful of vanilla.

Nut-Squares—Beat together one cupful of brown sugar, one egg and a pinch each of salt and soda. Add one cupful of finely chopped nut-meats. Bake in a moderate oven for twenty minutes; when cold cut in squares.

Colonial Ginger-Nuts—Rub one half pound of butter with one and one half pounds (six cupfuls) of sifted flour; after mixing well, add one cupful of brown sugar, one pint of molasses, two teaspoonfuls of soda dissolved in a little warm water and stirred into the molasses, two tablespoonfuls of ginger, one teaspoonful each of powdered cloves and cinnamon, and one teaspoonful of lemon-extract. Mold the dough into small balls, flatten and bake in buttered tins.

Maple Sugar Candy—One pound of soft maple sugar, three fourths of a cupful of thin cream, one fourth of a cupful of boiling water, two thirds of a cupful of English walnut or pecan meats cut in pieces. Break sugar in pieces; put into a saucepan with cream and water. Bring to boiling-point and boil until a soft ball is formed when tried in cold water. Remove from fire, beat until creamy, add nut-meats and pour into a buttered tin. Cool slightly and mark in squares.

Candied Orange-Peel—Carefully remove all of the peel from four thin-skinned oranges in quarters. Cover with cold water, bring gradually to the boiling-point and let simmer until soft. Drain and remove all white portion by scraping with a spoon. Cut yellow portion in thin strips, using the scissors. Boil one cupful of sugar and one half of a cupful of water, until syrup will thread when dropped from tip of spoon. Cook strips in syrup five minutes, drain, and roll in fine granulated sugar.

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ARE YOU WONDERING what to give your little daughter for Christmas?

Do you want to know of something that will make her jump up and down with joy?

If so, here's a suggestion for you. Just look on Page 27 of this issue and you will find it. It is a Christmas present to tuck in the toe of your little girl's stocking. It is a present that will cost you but ten cents. And it's a Christmas present that is instructive and really an ideal present, too.

It consists of a set of patterns for a doll's wardrobe. These patterns are made just as carefully as if they were designed for a little girl and not for her doll. The envelope which contains them shows a picture of Dearest Dolly, and holly wreaths, printed in color, decorate it.

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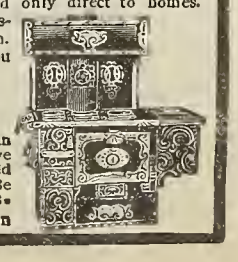

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Send $1.00 for one subscription to FARM AND FIRESIDE for three years (to one address) and you will be presented with this big box of fifty Christmas post-cards, absolutely without cost; also our big, beautiful 1911 calendar.

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Secure of two of your neighbors a subscription to FARM AND FIRESIDE for one year at 50 cents each; send us the two subscriptions with $1.00 and you will be presented with a box of fifty Christmas post-cards and our big, beautiful 1911 calendar; also your own subscription to FARM AND FIRESIDE will be extended for one full year. Each of your neighbors will also receive our beautiful 1911 calendar.

CHRISTMAS OFFER No. 4

Send 60 cents for one year's subscription to FARM AND FIRESIDE and a box of fifty Christmas post-cards; you will also receive our big, beautiful 1911 calendar.

Our Christmas Offers Expire December 25th

If your own subscription has not yet expired, it will pay you to renew now in advance in order to take advantage of these great offers. You know, a subscription may be either new or renewal; and on Offer No. 3 one of them may be your own. A beautiful Christmas Gift Card will be sent to any friend whom you may present with a year's subscription to FARM AND FIRESIDE in accordance with offer No. 3. This announcement card is handsomely embossed, printed in many colors and contains select Christmas sentiment.

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Please tell me how I can get the Talking and Sleeping Doll, without Cost.
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Poor Relations

[CONTINUED FROM PAGE 20]

cream, won't I, dear? That's what I'm accustomed to and that's my setting, I dare say."

The man put his arm about her. Mrs. Martin had picked up a morning edition of *The Chronicle* and was reading industriously, the uncomfortable lorgnettes on her nose. "Darling," Jack answered, "you're such a queenly creature that I somehow feel so helpless to give you anything. You're so self-reliant, Penelope."

A slight mockery came into the girl's face. "Oh, no, I'm not independent," she denied, "I'm bound by countless things, from my dressmaker to the gorgon, they say." She moved to the window and looked out. He followed her and suddenly questioned, "Pen, why won't you announce our engagement, I can't think of a reason? And I know a dozen why you should," his voice was perplexed. "Whenever I see that de Feronac with you, I wish I had the privilege of sending him right about face."

The girl turned and looked at him curiously, amusement in her eyes. "Why, Jack," she mocked, "you wouldn't descend to jealousy, would you?"

He exclaimed angrily and insisted, "Announce our engagement, Penelope."

She shook her head tantalizingly. "It's such a delicious secret," she pleaded. "It's so much fun to watch my other admirers coming at the quirk of my little finger and thinking all the time how furious they would be if they knew I was engaged."

"Is that quite fair?" he demanded.

"Of course not," she smiled. "It's just my little joke. Don't be impatient for a week or two, Jack, remember that with the announcement comes the end of the courting days."

Hastings was always uncomfortable when Penelope spoke in this strain, but she looked so charming in her smart cloth gown and soft furs, her voice was so winning in its sweetness that his annoyance disappeared and for a half hour they chatted harmoniously.

Then Mrs. Martin, pleading an engagement, hurried her daughter away.

Jack Hastings went back to his desk in a softened mood. A faint fragrance still permeated the office from the American Beauty Penelope had worn. The queen rose was her favorite flower and great sheaves of them found their way daily into her boudoir.

The man ran his fingers through a pile of letters carelessly. These were his days for dreaming, he concluded to himself, he had all his life to work in. Leaning back in his desk chair, his fine gray eyes half closed, he was just giving himself up to reflection when his secretary came in with a letter.

It was a letter of introduction from his college friend, Guy Haynes, who edited a newspaper in St. Paul, and it spoke in the highest terms of the ability of the bearer, Miss Marion Martin.

"Show Miss Martin in," he requested shyly, disappointedly, picturing to himself a lady to whom the title "Miss" no longer bears a pleasing meaning.

When Marion came into the office he started slightly and sat more erect. She looked very small in her tailored black suit. Her eyes were fixed on him while she asked softly, "You are Mr. Hastings?"

He rose and took her hand gently. Her mourning, the gentle inflection of her voice, her youthfulness, all made their appeal to the chivalry of the man.

He smiled encouragingly as he motioned her to a seat and said with surprising heartiness, "Mr. Haynes is one of my dearest friends. You may be assured that after what he says of your ability I shall certainly take this meeting as mutually fortunate."

The girl's eyes drooped and she bit her lips desperately. Through three quarters of an hour of waiting she had nerved herself for a businesslike interview, but she could not look at him. She felt that one look into his face would cost her her self-control.

"Thank you," she muttered faintly. "If I can get a position on the newspaper, I shall be so happy. I can write up almost any kind of an assignment, though I only contributed articles in St. Paul."

Immediately Hastings thought of Penelope's words: "A woman in business seems such a misplaced being." Surely that was true of this frail girl with her flower face. "I will send for the managing editor and see what vacancies there are," he said cheerily. "Then we will test you to see where you will fit." It never occurred to him to turn away this protégé of his friend. Loyalty was one of his strongest characteristics.

Marion was furious with herself. She had meant to say so many clever things. What was it about the very tones of the man's voice which confused her so utterly? She determined to conquer herself, so she looked up bravely. "Please don't judge me by what I'm saying," she begged. "I really am clever with a pen, but I suppose it's my very anxiety to succeed in this huge city that makes me so nervous! But wait until you see my manuscript. It doesn't sound like me at all."

A sudden pity for her took possession of him. Her father had died, Haynes had written, throwing the girls on their own resources. He laughed to relieve her embarrassment as she finished feverishly, and just then the managing editor entered.

"Miss Martin," Mr. Hastings began, "allow me to present Mr. Van Nest to you. He is the power behind the throne down here."

"Mr. Van Nest," his employer turned to him, "Miss Martin comes from St. Paul highly recommended by a friend of mine. Where can we place her on the paper?"

"There isn't a real vacancy anywhere," he replied promptly, "I'm sorry to say."

Hastings frowned. "There must be," he insisted. "What about the society field?" Instantly he decided to shield this girl from the rougher sides of the business.

"Well," the manager hesitated while Marion looked at him tensely, "we might use another assistant, but we don't—"

"Good," his superior broke in, not allowing him to go further.

"That will do very well. Miss Martin, what do you say to writing up pink teas?"

Suddenly the girl found her tongue while a feeling of thankfulness brought a sparkle to her eyes and dimples in her cheeks.

"I shall make every hostess love me," she exclaimed. "I'll never get the guest lists wrong nor misquote the menu."

Both men smiled. There was something so childlike in her exuberance. Mr. Van Nest walked toward the door, "I'm needed down-stairs, Mr. Hastings, so I'll leave you to settle details with Miss Martin." Hastings nodded, so the man disappeared.

For fifteen minutes the interview lasted, but the girl was herself once more and it was with more than usual dignity that she made her adieux.

"She has ability," Hastings mused, recalling her later conversation, "but what a child to be overawed by me at first. I'll try to help her along for Guy's sake," he promised himself, a vision of her appealing blue eyes before him. He seemed to admire her.

[TO BE CONTINUED IN NEXT ISSUE]

The Housewife's Letter-Box

Have you been looking for a special recipe for years? And do you meet with little problems in the home that you wish some one would solve for you—some one who has had a little more experience than you? Then, why not make use of YOUR OWN department and ask the questions which have been troubling you? This department has proved that the spirit of helpfulness is abroad in the land, especially among the women of the farm. That our readers have the mutual desire to help one another is evidenced by the large and prompt response we have had to the questions which are printed here monthly. There is no payment made for contributions to these columns. All answers and inquiries should be addressed to "The Housewife's Letter-Box," care of Farm and Fireside, Springfield, Ohio.

Questions Asked

Will some one please tell me—

How to rid our house of rats? Our farmhouse is infested with them.

A. D., California.

What will remove red that faded from my saddle-blanket on my khaki riding-skirt?

E. E. G., Oregon.

How to make vinegar from apple-cider? I have one hundred and forty gallons of cider that I want to turn into vinegar.

J. L. H., West Virginia.

Why my pumpkin and squash pies do not get nice and brown on top? I have tried pouring milk on top and again the white of eggs and have also tried molasses—but without results. That brown skin will not come. My range is a perfect baker, so I cannot lay the cause to that. D. O., New York.

How to make candied citron, orange-peel and cherries? Also how to remove from linen or muslin spots—which look something like iron rust—caused from goods being closed up in a trunk for a long time?

A. L. H., Illinois.

How to make Neapolitan cake, also cracker-jack? L. M. S., Ohio.

A recipe for making cream layer cake—the amount of each ingredient and how to mix? E. F., California.

What causes begonia leaves to dry around the edges? Is there something I can do to prevent them drying? Mine is only two years old. E. S. G., Pennsylvania.

A recipe for making fudge, also a recipe for making marshmallows.

MRS. A. O. P., Ohio.

Send me a sample of a knitted star for a center in a bedspread, a star that is about 12 inches square, also a knitted pattern of Vandykes. MRS. J. F. E. O., Illinois.

For Mrs. A., Ohio

Here is my recipe for quince-honey: It is a little different from Mrs. A. B.'s. Pare, core and grate three quinces. Add two and one half pounds of granulated sugar, one and one fourth quarts of water and boil until it strings. MRS. M. A. T., Kansas.

For Mrs. O. M. K., Illinois

Mrs. D. C. S., Illinois, thinks the cause of your having to churn so long is that your cow is on white clover. Is she right?

One reader, who signs herself "Subscriber," writes: "I buy five cents' worth of copperas and beat it up fine and give cow one teaspoonful in bran for three feeds a day, and continue doing this for one week. If not all right, repeat. It will not hurt the cow."

For "A Subscriber"

To extract oil from peppermint, cover bruised leaves and flowers with ether and let stand until the oil rises to the top. To extract large quantities, use a still; a small one can be bought for five dollars.

MRS. W. H. C., New Mexico.

If "A Subscriber" who asked for above information will send her name and address to the Letter-Box, I will be able to give her more help. EDITOR.

Esmé and the Turn of the Tide

[CONTINUED FROM PAGE 22]

"If you *must* marry me? But I have come to tell you that you need not." He spoke abruptly, with almost brutal suddenness. "I free you from your promise. Why should we—your father and I—conspire to spoil your life?"

She turned and looked at him with a long, searching glance, so beautiful in what he took to be her relief that a pang shot through him.

"But he—my father—the—the money?" She stopped, the look in his eyes arresting her and making her tremble with some vague feeling she could not fathom.

He stooped and picked up a long brown ribbon of seaweed, drawing it through his fingers mechanically.

"I am ready to keep my promise," she said, after a momentary silence, "we can not discharge our debt in any other way."

For an instant he felt sorely tempted to hold her to her word.

The sun shining on her uncovered head brought out golden gleams among the brown, her eyes, looking up at him, held golden lights. When he spoke, his voice sounded hoarse in his own ears.

"You can hardly realize how you tempt me to take you at your word," he said slowly. "I am not giving you up lightly, God knows! If you cared one half as much as I do, it would be different."

The regret in his voice touched a chord somewhere in her consciousness. If she cared—

She turned to him impulsively.

"*Do* you care so much, then?" she asked, with a certain suppressed earnestness. "I thought it was just a business arrangement between you. You never told me, never explained—how was I to know you cared?"

Faraday felt that the world around was rocking at its base. He had never told her; he imagined that every woman knew by instinct—

He put out his hand and took hers. She should know now how it was with him, even if the telling of it led to the final parting.

"You did not know I loved you? That to me you are the most desirable thing on earth? The first moment I saw you I knew you to be the one woman in the world. It was madness to dream that you would ever care for me in return. There is nothing about me, heaven knows, to gain the love of any woman. Then one day your father came to me and told me he was a ruined man if he could not borrow a large sum of money. In a moment all my sense of honor went by the board, and I saw how I might win you. I had him in my power, and there and then we struck a bargain. *You* were to pay the price of his unwise ventures. Now you know the truth. It was not hard business that prompted me, but the love that I had dreamed of but never known."

His voice broke off for a moment, and his grasp on her hand loosened. But she left her hand in his.

"I did not know," she said in a low tone, "I wish you had told me. He, my father, gave me to understand that it was my duty to stand by him, to help him to discharge his obligations to you by marrying you. He never let me suppose that you—cared—I never guessed—you were always so silent, so reserved. If I had known—"

His eyes held hers, compelling her to honesty. She faced him, and for a moment there was a silence that was only broken by the lap-lapping of the waves and the melancholy cry of the gulls. His grasp on her hand grew closer, more insistent.

"Would it have made any difference if you had known? Tell me—Esmé—"

She hesitated, then shook her head, her eyes filled with doubt.

"You interested me from the first. I wanted to know you better—how can I explain? It must make a difference."

He felt a rush of feeling, of inexplicable joy.

"Let us leave it at that for the present, don't try to explain. Some day perhaps—"

Then suddenly he felt her hand on his arm. She was looking down.

The tide, sweeping along resistlessly, had reached the sands where they stood. It flowed over their feet, leaving a creamy line of foam on their shoes, and then retreated as if laughing at their consternation. Faraday's eyes, following hers, saw that they must move, though he did not realize the dangers of the coast as she did. She was getting wet, that was enough.

"The tide is simply racing in, we must get farther inland."

But she, looking around her, knew that danger was imminent. Perhaps even now it might be too late. She looked at the smooth, inaccessible wall of cliff behind. There was no outlet there. They must climb the reef of rocks that lay between them and the little bay beyond, whose beach was still uncovered by the tide. He noticed that her face had grown pale. She stepped upon a weed-covered rock and he put out a hand to steady her.

"We must get across to that stretch of sand," he said, surprised at the anxiety of her eyes, "and we must not delay. The wind is rising, and see, that wave touched the hem of your skirt. Let us race for it."

At the first suggestion of danger his face had grown alert, young, resourceful. She glanced at him, arrested by the change.

"Come!" He held out his hand, and she put her own into it, feeling a sudden sense of comfort and protection as his fingers closed around her palm. The tide seemed to follow them in a miraculous way as they went, the waves increasing in volume and rolling in with a hissing sound that seemed to hold an ominous meaning. She saw he did not fully understand the danger they were in. Her face held a passion of self-reproach.

"I ought to have remembered," she said remorsefully, as they made their way through the wet, clogging sand toward the reef. "Perhaps we can do it yet."

"Why, of course," he broke in, half amused, glad to find himself so near to her and on such friendly terms. "We shall have nothing worse than a drenching to remember. That channel between us and the reef can't be so very deep yet. You must let me carry you over."

She shook her head, her eyes measuring the swirling water in the channel.

"It is deeper and wider than it looks," she said, "and it is full of deep holes. It is a very dangerous coast."

"There is no other way?" He glanced up at the frowning line of cliffs.

She shook her head, and stood on the brink of the reef that divided them from the channel.

"I will carry you across. You shall not risk it."

But she drew back, decision in every line of her face.

"You will need all your own strength to get across yourself. It is so slippery with seaweed that one can hardly keep a footing. Go first and feel with your stick for the deepest holes. I will follow. Please go."

For the first time, some of her gravity communicated itself to him.

"The belt of my Norfolk is strong," he said, "promise to hold on to it. That's better. Are you ready?"

He waded into the channel, and felt his way step by step. The water was icy cold, and the strength of the current surprised him. It was deeper than he could have imagined, and the swirling of the water, combined with the slippery seaweed at the bottom of the channel, made progress hard.

He was up to the waist now, and he was a tall man. He glanced around. The water was almost on a level with her shoulders. He steadied himself and stooped.

"You must climb on my back."

"No, no."

"Do as I tell you." His voice held a note of command, and she obeyed. He was no longer the man she had known, but strong, alert, almost exultant in the face of danger.

"There, that's better, hold on." Then, as her clasp loosened, "you're not feeling faint, are you? For goodness sake, hold on."

He waded doggedly through the stream. The waves churned in white foam up the channel and the wind roared in their faces.

Faraday set his teeth. He was struggling for his life and hers now, and for something that life hitherto had not held for him—a happiness beyond all imagining.

They were midway across in the full force of the current. He was buffeted first to this side, then to that. The water surged higher, he swayed, half slipped, then with a muttered sound, he regained his footing.

A momentary vision had come of her fair head among the blackness of the rocks. He paused for breath, then stumbled on again.

The sun glinted out through the clouds, turning the sands beyond into gold, an Eldorado that mocked him with its brightness. His breath came in gasps, the water lapped under his chin. Then as suddenly it receded, and he stepped upon a higher layer of rock to shallower water beyond.

Esmé slipped to the sand, and silently, hand in hand, they made their way to safety.

On a little path, midway up the cliff out of reach of the tide, was a rough wooden bench. The sun shone hotly down on them, bringing warmth and comfort. Still silent, they sat there, hands interlaced, until from a distant meadow near the shore a lark burst into song. Then, in the sunshine and the fragrance and the warmth Faraday stooped and kissed her.

In the Christmas Dawn

[CONTINUED FROM PAGE 21]

looked up, all the young gold of her tumbled braids about her face, all the young blue of the dawn in her eyes. "Some day," she said, "my Bobby will be grown up, too, like yours, and I shall have to give him to some one else. But I am not afraid even of that time any more." She paused a breath space. Shy Rachel had never in her life spoken out to any one but Bobby. It is very precious, the gift of words from one like Rachel. She ended now, "Mother, there is something about you that makes me not afraid of any of the things—that must come—to a woman." Then bending above her baby on the grandmother's knee she whispered, because there was not another thing to say, "Kiss him!"

But it was Rachel that the mother kissed, so sweet the gifts the Christmas-tide had brought.

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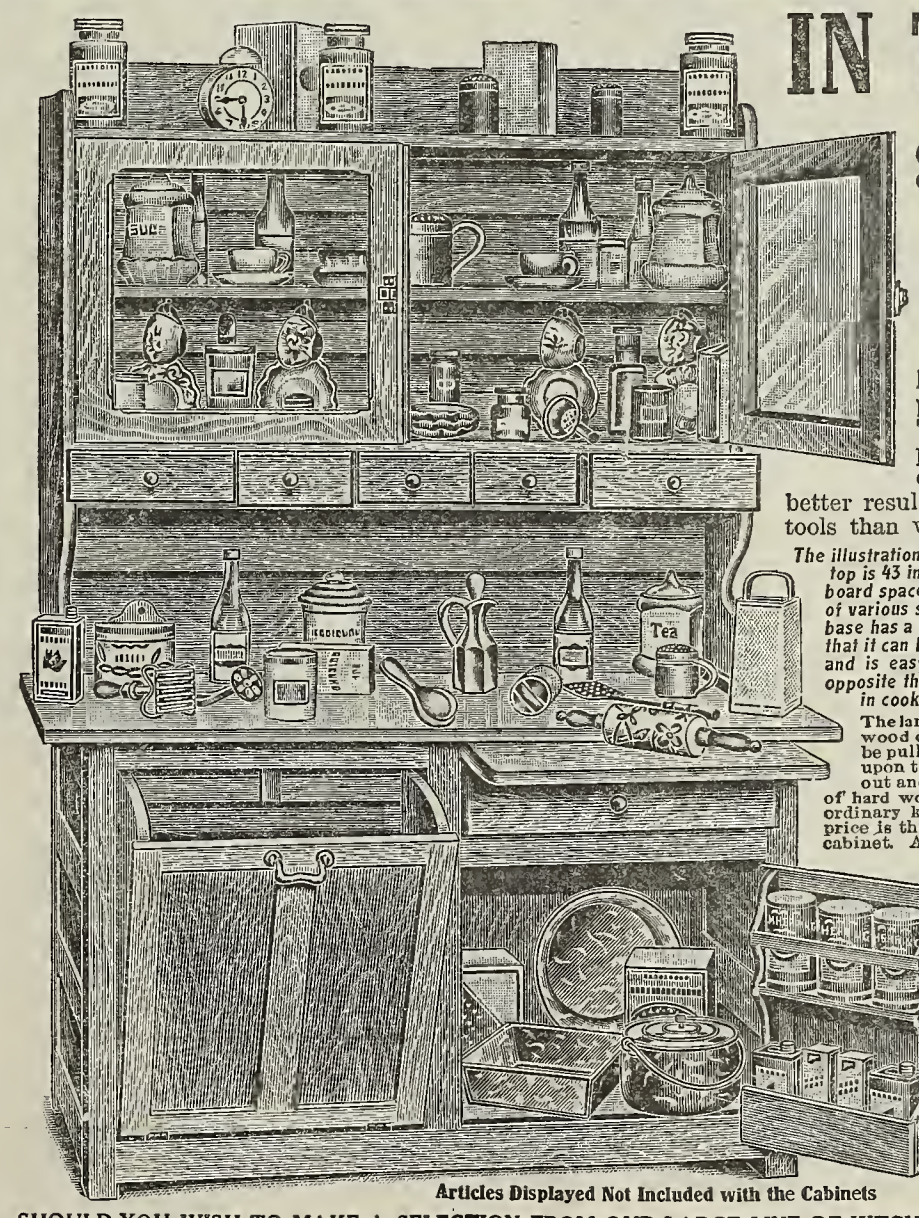

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The illustration shows as well as a picture can the details of this cabinet. The top is 43 inches high, 38 inches wide and 10½ inches deep, making more cupboard space than usually found in a cupboard of this style. It has five drawers of various sizes and two glass doors, all well made and perfectly fitted. The base has a large flour bin, 12x16x24, made of hard wood. It is so constructed that it can be removed for cleaning. The space back of the bin can be used and is easy of access. The large drawer and a cupboard occupy the space opposite the flour bin, affording sufficient room for most of the utensils used in cooking and the materials not otherwise provided for.

The large kneading board, 16½x20¾ inches, is made of clear birch with hard wood cleats on each end to keep it from warping out of shape and can be pulled out part way, as shown in the illustration, resting for support upon the solid part of the frame. Or, if desired, it can be pulled clear out and placed on top of the table. This cabinet is carefully constructed of hard wood, well finished and is a complete pantry in the space of an ordinary kitchen table. It is a practical and high grade piece and at our price is the greatest value that has ever been offered in a large, well made cabinet. All our cabinets are of a much higher grade than usually sold at these prices, and we can guarantee satisfaction on every one, as they are made by a factory producing the highest grade goods in this line and we know that it will please you. Shipped direct from factory in Michigan and weighs about 160 pounds.

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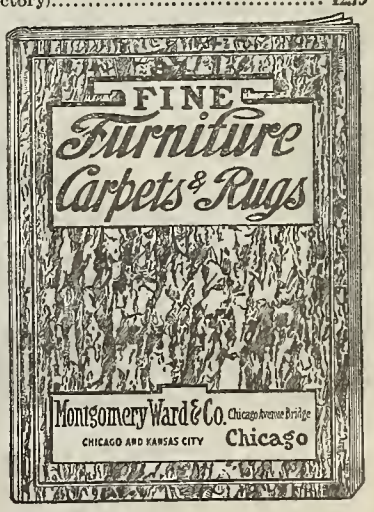

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FURNITURE AND CARPET CATALOGUE

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Williamsport, Pa., May 17, 1910.
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Milwankee, Wis.
Gentlemen:—We have used one pail of your food for our two horses. It saved the life of one of them after everything else failed. Please give us price and terms on pails. Yours,
BOYS' INDUSTRIAL HOME,
T. P. S. Wilson, Mgr.

Arkansas City, Kans., Apr. 5, 1910.
Wilbur Stock Food Co.,
Milwaukee, Wis.
Gentlemen:—Wonld like to know what the prices on one thousand pound lots would be. Have been feeding it abont two months and think it is all it is claimed to be. Hoping to hear from you soon, I am, Respectfully,
BERT WILHELM, R.F.D.No.6.

Stephens, Ark., Dec. 17, 1909.
Wilbur Stock Food Co., Milwaukee, Wis.
Dear Sirs:—You will find herewith enclosed money for the five pails of tonic. Will say, it is all you claim for it and more. I tried it on a sick calf, which was nearly dead with sores. The first dose relieved it and now it is alright. It is good for all kinds of stock. I found it cannot be beat. It is a God's blessing.
Yours truly, J. J. CARROLL.

F. P. Wilbur President

WILBUR STOCK FOOD CO., 933 Huron St., Milwaukee, Wis.

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My Name _____

P. O. _____ R. F. D. _____

Freight Station _____ State _____

TESTIMONIAL LETTERS

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Wilbur Stock Food Co., Milwaukee, Wis.
Gentlemen:—Received my watch in good condition and was surprised to find it so nice, and I appreciate it very much. It has kept good time ever since I got it and don't see how you could have sent it.
I think your Stock Tonic is the best made. Have used several different kinds of Stock Tonic, but never found any that will do as much as yours. I have sold ten pigs (would have been six months old the middle of February) and they weighed 200 pounds apiece. Some wanted to know how I fattened them and what I fed them that made them grow so fast, and, of course, I had to tell them it was Wilbur's Stock Tonic.
I have seven head of horses and they are rolling fat. When I hitch them up they are so high-lifed that I can hardly do anything with them. They are always up and ready to go. Everybody wants to know what keeps them in such good condition and I tell them it is your Stock Tonic that does it. I have a team that is equal to your champion team on your envelopes. They are fine, and eat Stock Tonic three times a day. I thank you for your past favors, and remain,
Your agent, W. M. RANDLE.

Colebrook, N. H.
Wilbur Stock Food Co., Milwaukee, Wis.
Gentlemen:—I have been feeding your Tonic to my horses, cows and pigs with the best of results. I have one old horse that was very thin and did not think he would pull through this winter, but now I am sure he will, for he feels like a colt and is looking fine. He is worth $25.00 more today than he was six weeks ago, when I commenced to give him the Tonic. I can recommend it to anyone to be the tonic to have,
Yours respectfully,
ALBERT CORBETT.

Williamsburg, Ohio.
Wilbur Stock Food Co., Milwaukee, Wis.
To whom it may concern:—I have used Wilbur's Stock Tonic and can say I will use it as long as I have any stock, whatever kind it may be, to feed. Feed your chickens, and you get more eggs; feed your horse, and he will do more work; feed your cow, and she will give more milk; feed your hog, and he will give more pounds of pork; and to make a long story short, you can't afford to be without it. So please hurry my five pail order for me.
Sincerely yours, JAMES J. WAGNER.

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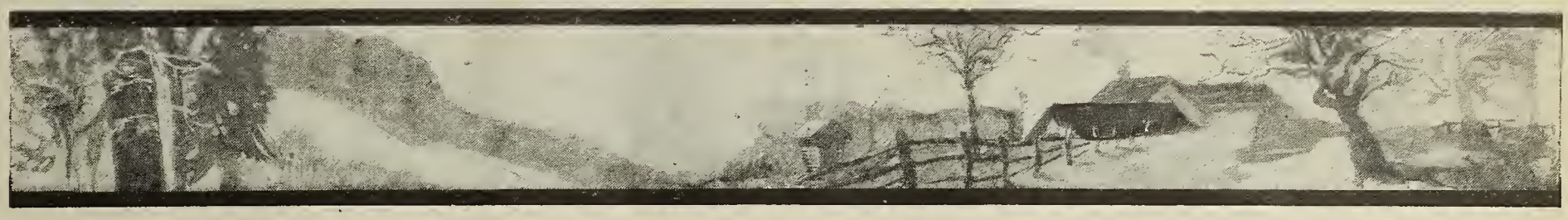
WESTERN EDITION

FARM AND FIRESIDE

THE NATIONAL FARM PAPER



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The Life-Story of a Benefactor of Agriculture—This Issue

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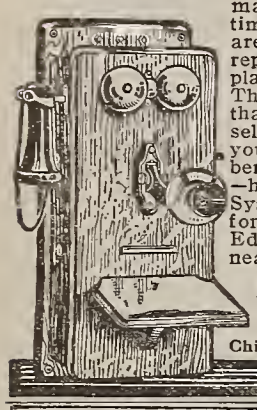

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We also have irrigated orange land, 20 acres of which will make you a beautiful home and independent for life, all being sold at bed-rock prices, on easy terms. Reduced railway fares, and private pullman, kitchen cars on our excursions. Write for booklet and excursion dates. **Agents wanted.**

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With the Editor

Mr. Louis D. Brandeis certainly has caught the ear of the world with his "efficiency" argument before the Interstate Commerce Commission. The railways ask permission to raise rates. Mr. Brandeis asserts that if they knew their business they could make plenty of money at their present rates. He says that they do things in a wasteful and inefficient way, and that if they would reform their ways of doing things, they could save something like a million dollars a day.

The railway managers say that Mr. Brandeis is talking through his hat—and maybe he is. But he has raised a doubt in the minds of the people—and I suspect in that of a lot of railway men.

We can all improve our ways of doing things. If the railways lose a million dollars a day on account of inefficient ways of doing work, how many millions do you suppose the farmers lose?

I don't know; but I do know that if I could choose between the income of J. P. Morgan or John D. Rockefeller and the value of the time lost on the farms of the United States by needless turning around, I'd take the latter. I think I'd be the gainer by the choice.

We are confronted by a problem in efficiency on my farm. We are growing a few apples, and after a few years we expect to have a number of car-loads of both apples and peaches every year. Selling apples is largely a matter of good grading, good packing and good business methods generally. The time is coming fast when it will be considered as wasteful to sell good apples in the old-fashioned barrel pack as to sell walnuts in the husks or dressed pork in the hair. They will have to go in boxes, with paper wrapped about each apple, if they sell for the top prices. Boxes will succeed barrels for all but the lowest grades—or so it looks now. Efficiency demands the new methods.

But very few Eastern apple growers know how to pack apples in boxes. At the apple show at Martinsburg, West Virginia, we had some apples packed in boxes, but the skilled packer who came up from Winchester to show us how the trick was done laughed at the pack. He knew how. He asserted that he packed sixty-five boxes of apples one day, and no two packs alike. What do you think of that? Sixty-five different ways to pack apples in boxes!

At Berkeley Springs that night, I had a talk with a theatrical man who said that he was once stranded in the California orange country, and got a job in an orchard. Packing looked easy to him, so he chose that work. His employer stood good for his board at five dollars a week, and at the end of a week there was a balance of forty cents due the employer. The wages were only four dollars and sixty cents. Yet he had packed oranges as well as he knew how. Then he changed to toting oranges and made four dollars a day. There's the difference in efficiency—four-sixty a week for the inefficient, four a day for the efficient.

My skilled friend at Martinsburg led me to believe that orange-packing is easier than apple-packing—that oranges are the A B C of the packing craft, and apples the X Y Z of it. He said that nobody could be a really good apple-packer who hadn't learned on oranges—but I don't believe that.

I used to husk forty bushels of corn a day in Iowa, when a youth—and thought myself a good husker. Eastern readers must remember that we husk corn in Iowa by driving straddle of the last husked row with the wagon, and husking from the standing stalks into the wagon-box. We put on a high throw-board to catch the ears as we throw them in, and drive the team by talking to them. I remember when it took three men to a team—one to husk two rows on the near side, one ditto on the off side, and one behind the wagon to husk the down row that the wagon and horses passed over—but we found a way to achieve greater efficiency. By the one-man-to-a-wagon system and the throw-board we could husk from forty to sixty bushels a day.

The first man to do better in our neighborhood was Charley Stilwell. We heard that he could crib a hundred bushels a day—but we said that they could tell that to their grandmothers, for we knew better. But one day I drove along the road and saw Charley Stilwell husking corn. He seemed to make only one pass at an ear. He looked at nothing but the hills of corn. The team moved on and stopped and moved on again, and the ears thumped against the throw-board as fast as a clock ticks—thump, thump, thump! There was scarcely a moment when there was not an ear in the air. It was marvelous. And then I knew that the story was true. Charley Stilwell had pushed efficiency in corn-husking up to the hundred-bushel mark—and a few days after that he actually cribbed one hundred and twenty bushels in eight hours!

Plenty of huskers can do it now. The standard of efficiency is higher than it used to be.

There are bad, good and best ways of doing everything. They used to say on the Great Northern that Jim Hill couldn't be satisfied to allow a section man drive a spike in his own way, but must meddle with the matter and show him how. Probably Mr. Hill was both right and wrong in this if the charge be true. That the average efficiency in driving spikes might be increased is unquestionably true; that Mr. Hill in person is the proper man to teach this higher efficiency may be doubted. But that there is somewhere the man who can tell the best way to strike a spike is probable. As I understand Mr. Brandeis, the job of the railways is to hunt up this man, and have him teach the spike-drivers and engine-drivers and all the rest the really efficient way to do things.

As for me, I must learn the efficient way to pack apples. All of us are not dubs at everything; but every one of us is a dub at something. Efficiency is the abolition of dubhood. There are ways of doing plowing, hoeing, harvesting, hauling and every farm task better than the average. The plowing contests that are held in various parts of the country are good things. A recent Agricultural Department bulletin—Circular 99—recommends contests in milking, grooming horses, wood-chopping, fence-building, corn-husking, draining, grain-shocking, hay and grain mowing and stacking, fruit-gathering, fruit-grading, fruit-packing, whitewashing, spraying, pruning, plowing, horseshoeing, sheep-shearing, setting up machinery, cotton-chopping, cotton-picking, cooking, baking, preserving, dressmaking, house-decoration, papering, millinery and similar every-day matters.

The bulletin says that these are things in which greater dexterity and skill are needed. I should think so! While the railways are saving that million a day, we might do the same over and over again—taking all farmers together.

Herbert Quick

Index to Advertisements

Agents Wonted
Bushway Flavoring Extract Company... 25
Foote Manufacturing Company..... 28
Automobiles
Abbott Motor Company..... 15
Bone-Cutters and Grinders
Crown Point Manufacturing Company... 13
Ditto, G. M..... 11
Mann, F. W..... 13
Stearns & Company, E. C..... 13
Books ond Periodicals
Atkinson, Wilmer Company..... 12
Hanson's Magazine Agency..... 21
Hartley Publishing Company..... 14
Rossiter, Will..... 28
Scientific American..... 8
Clothing, Gloves, Boots, Shoes ond Underweor
Arlington Company..... 28
Eddystone Manufacturing Company..... 25
Eisendrath Glove Company..... 2
Wright's Health Underwear..... 10
Correspondence Schools
Lincoln Commercial School..... 8
Page Davis Company..... 10-28
Sprague Correspondence School of Law.. 2
Drills
American Seeding Machine Company.... 8
Fanning ond Saw Mills
American Saw Mill Machinery Company. 8
Campbell Company, Manson..... 8
Folding Sawing Machine Company..... 8
Farm Engines
Galloway, William..... 10
Waterloo Gasoline Engine Company..... 7
Form Tools
Foote Manufacturing Company..... 28
Fences ond Fencing Materiols
Brown Fence and Wire Company..... 13
Bond Steel Post Company..... 13
Coiled Spring Fence Company..... 13
Kitselman Brothers..... 13
Ward Fence Company..... 13
Ferrets
Augustine Brothers..... 14
Fertilizers
German Kali Works..... 9
Fireorms
The Remington Arms Company..... 14
Winchester Arms Company..... 14
Food-Stuffs
Baker & Company, Walter..... 28
Bushway Flavoring Extract Company... 25
National Biscuit Company..... 27
Postum Cereal Company..... 25-28
Harrows
American Harrow Company..... 9
Hay-Presses
Kansas City Hay Press..... 8
Hide ond Fur Deolers
Belt, Butler Company..... 14
Corry Hide and Fur Company..... 14
Crosby Frisian Fur Company..... 14
Funsten Brothers & Company..... 15
Hartley Publishing Company..... 14
Lea Hide and Fur, Albert..... 14
McMillan Fur and Wool Company..... 14
Myers-Boyd Commission Company..... 14
Northwestern Hide and Fur Company... 14
Pfaelzer & Company, M. F..... 15
Sloman & Company, M..... 15
St. Louis Fur Company..... 14
Taylor & Company, F. C..... 14
Household Miscellaneous
Whittemore Brothers & Company..... 28
Incubators and Poultry
Atwood. C. M..... 13
Belle City Incubator..... 13
Burk, A. P..... 13
Berry's Poultry Farm, A. A..... 13
Des Moines Incubator Company..... 13
Miller, J. W..... 13
Nebraska Incubator Company..... 13
Pfile, Henry..... 13
Rayo Incubator..... 13
Shoemaker, C. C..... 13
X-Ray Incubator Company..... 13
Land
Brooksville Board of Trade..... 13
McBurney, Stocking & Company..... 14
Nashville, Chattanooga and St. Louis Railway..... 7
Porter Land Company..... 2
Lights, Burners, Chimneys, Etc.
Best Light Company..... 28
Macbeth Evans Glass Company..... 28
Mantle Lamp Company..... 28
Sun Vapor Light Company..... 21
Patent Attorneys
Bunyea Company, E. P..... 10
Chandlee & Chandlee..... 8
Coleman, Watson E..... 14
Evans, Victor J..... 8
Farnham & Sues..... 13
Lacey, R. S. & A. B..... 13
Pianos, Orgons and Musicol Instruments
Cornish Company..... 21
Dyer & Brothers, W. J..... 21
Pumps
Goulds Manufacturing Company..... 13
Roofing
Barber Asphalt Company..... 10
Seeds, Plants, Etc.
Galbraith's Nurseries..... 8
Gardner Nurseries..... 9
Separators
American Separator Company..... 11
Galloway, William..... 11
Sharples Separator..... 11
Spraying Machines
Rochester Spray Pump Company..... 8
Spreaders
Galloway, William..... 8
Stock Remedies
Newton Remedy..... 11
Stoves, Ronges and Heaters
Kalamazoo Stove Company..... 28
Telephone and Apporatus
Stromberg Carlson Telephone Company.. 2
Western Electric Company..... 9
Wagon Accessories
Boob Wheel Company..... 13
Electric Wheel Company..... 10
Harvey Spring Company..... 11
Well-Drilling Machines
Austin Manufacturing Company..... 13

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ESTABLISHED 1877
The Illustrated Farm and Family Journal

24 NUMBERS
50 CENTS

Vol. XXXIV. No. 6 Springfield, Ohio, December 25, 1910 PUBLISHED SEMI-MONTHLY

A Pioneer in Agriculture

By Charles J. Woodbury

FARM AND FIRESIDE has presented many stories of the benefactors of American agriculture. No such series is complete without the inclusion of Eugene W. Hilgard. In the development of California he has been truly a pioneer, for under his guidance the scientific Why of the new problems of the coast has been worked out and forced to yield the practical How of their solution. But this has been but one angle of Professor Hilgard's usefulness. It would be hard to measure the service to American farmers of the soil experts of their experiment stations, and harder to measure the debt of the soil analysts to Hilgard for his trail-making in their science. EDITOR.

CALIFORNIA'S abrupt arrival from the great gold to the great grain and fruit producing state is an interesting story, and Eugene Woldemar Hilgard is its prominent figure.

When the yearly yield of the placers fell from eighty-one millions to less than seven, the Argonauts turned to the lands with hope that they might be more than the mines. But the new work lacked the old lure. Reinforced by a more agrarian immigration, the enlarged farming communities found themselves frequently at fault. Though they believed in the land they did not understand it. They knew only the agricultural formulæ of New England and the interior, and these did not meet the case. They determined upon a scientific solution of their problem. It was this, the initiative of the farmers of the state, that created the University of California. Its organic act reads, "The college of agriculture shall be first established."

This was in 1868. In 1875, Professor Hilgard was appointed professor of agriculture, less to teach agriculture in Berkeley than to rescue it throughout the state. To him, also, the land of rainless summers was new. He had been familiar with only the farming soils of the west central states, south and north. But he was eminent in agricultural science; and, what was as much to the purpose, he had in his previous career shown his power to assimilate new conditions.

Scientific Pathfinding

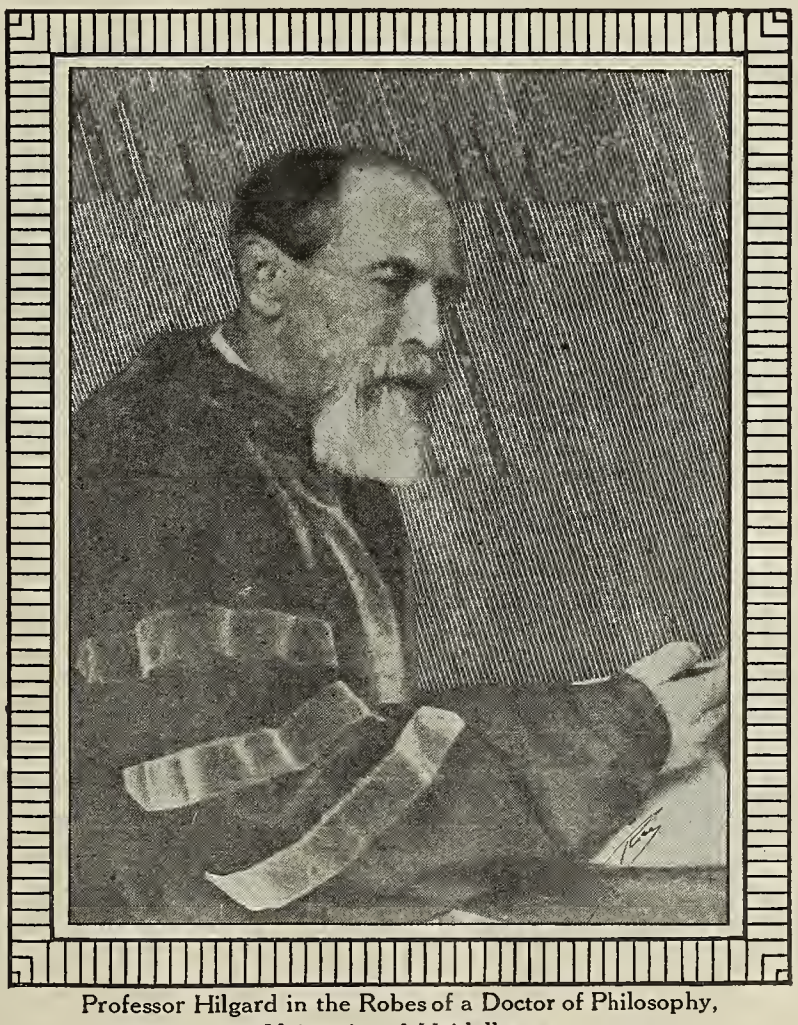
IT was a fortunate alliance of the field and the man. The master-mind was at once manifest. First, to grasp the situation he thoroughly explored his new territory. He traced the cold trails that had led nowhere. He saw the mirror of Eastern agricultural traditions that the state had become. He recognized the temperaments of the unproven plains and valleys and of the climates, contrasting even more with one another than even with the East. He examined the soils of the Pacific slope in their relation to geology, to their chemical and physical constitution and composition, native vegetation and agricultural possibilities. For the purpose of mechanical soil analysis, he invented a special instrument by which the tillable qualities of all soils are determined.

He put into the field assistant chemists who carried out investigations under his personal direction. He supplemented them with a system of practical development. He established the state experiment center with agricultural substations in different parts of the state. He initiated the agitation which in 1903-4 resulted in the appropriation by the state legislature of $150,000 for the purchase of a farm for the college of agriculture.

The resources of the state are now so mobilized for its agriculture that we cannot realize the difficulties that have stood in the way, the forces that have attacked at every step. Although the original movement was toward the agricultural college, yet no sooner was it established than it encountered indifference not only from the board of regents, but also from the incipient industry that had created it. The income of the agricultural endowment was frequently diverted to other avenues of education. The farmers regarded the new methods as merely theoretic, and desired that the money "serve some useful purpose." The grangers demanded that the college of agriculture should be separated from the university and located in the rural districts; and, unless this was done, they determined that it should have but few students.

Nor was the college itself united in support of the new departures. Suspicion of the strange ways and resolve to render them of no avail appeared even there. It has only been within the last fifteen years that all this has been overcome. Now, since the purchase of the farm, the legislature has appropriated sums aggregating $260,000 for buildings, equipment and stock. The latest machinery, practical devices for measuring water, implements for irrigation, all the appliances for agricultural and horticultural practice and dairy and animal husbandry, and multitudes of enthusiastic students at the college and on the farm are in evidence. The farm is admitted to be the best in the state. The state appropriation bill for agricultural agencies is $210,025. The entire endowment, regular and special, is $513,423.

A picturesque illustration of the necessity for the new ideas and new methods inaugurated by Professor Hilgard is afforded to the California tourist who enters the state by way of Sacramento, on one of the daily steamers that ply between that city and San Francisco. The first lands seen are those of the delta islands, divided by the fingers of the broad river. Their soil ranks with the richest in the world. The floor of the mainland beyond them on either side presents to the vision vast untimbered areas as far as the horizon. The immediate valleys and those beyond them were once the bed of the ocean. The land was made by erosion from the mountains. Unlike the soil of the middle Western states, these are as easily plowed the first as any subsequent time. There is no hard subsoil.



Professor Hilgard in the Robes of a Doctor of Philosophy, University of Heidelberg

The application of this discovery to theoretic and practical agriculture was one of the earliest services of Professor Hilgard. He showed that the distinction between soil and subsoil that California settlers had been accustomed to do in their old homes did not exist in the attractive country of their adoption; that the new lands were all soil; that the farmer could plow as deep as he pleased without bringing up any of the raw, yellow subsoil unfit for seed-bed; that he has as many feet of soil as the Eastern farmer has inches. The soil is much richer in food for the plant, like that of the Nile valley, the Netherlands and portions of France and Italy. He showed how to know beforehand what kind of alkali lands it would pay to reclaim for cultivation and how it should be done, and how highly and lastingly productive they are when the injurious salts are washed through the soils into the streams or drained underground. He compared the types of Eastern and California soils, the familiar "upland" soil of the East with the Western loam and bench land.

Then, the temperatures! For in California is the first declaration of the transformation of seasons, which is completed in Australia. It isn't so much "the California climate" as it is the California climates! They are an enigma. The words "north" and "south" have lost their old meaning. The isothermal lines seem lawless. Professor Hilgard traced the climatic loops. He showed how the average temperature of Red Bluff in the north and of Los Angeles in the south is about the same, and encouraged orange culture in the former locality by declaring that it would produce earlier and as delicious fruit, which was found to be the fact. The citrus belt is now recognized as a climatic unit for six hundred miles from Chama to Riverside.

In 1893, Professor Hilgard met on the Rigi a group of European scientists at a discussion of the misfortune that had befallen the German orchards that year, a six-weeks' drought that caused the half-ripe fruit to fall. "Gentlemen," he said, "in California to-day the orchards are under the stress of a six-months' drought, and the fruit is ripening perfectly." It was the first intelligence the savants had received of the nature of the arid soil in the storage of water at great depth, accessible to the roots on account of the perviousness of the subsoils, enabling the trees to get moisture during protracted drought.

Acid Soils Nature's Treasuries

A VIVID contrast of the characters of these soils is presented in the table shown on the following page. Professor Hilgard thus comments upon it:

"It will be seen from this table that lime, which is one of the most fundamentally important soil ingredients, and which in the humid climate of the East is so constantly used as a soil-improver, is almost thirteen times as abundant in the arid as in the humid soil. It will also be noted that potash, one of the fertilizers most abundantly used in the Eastern states, is met with in the arid soils to an extent three times greater, while there is little difference in phosphoric acid. The peculiar feature in regard to nitrogen, the most expensive of all the fertilizing elements, is that it exists in the humus of the arid region to a percentage three times higher than in the East. In addition, therefore, to the greater depth of the arid soils, they are also notably richer in the ingredients of plant-food and conditions of fertility.

"As I said to the Physiological Society of Berlin," continued the professor, "we erroneously think of the older soils, those, for instance, of the Bible countries, Mesopotamia, Asia-Minor, Egypt and East India, as dead. They can never die. They are as strong and fertile to-day as they were two thousand years ago. The highest civilization is to be in the arid lands, for they are lastingly fertile, and their cultivation necessitates social organization.

His most recent service to the state of his adoption is the summation of all his efforts in his latest work, "Agriculture for Schools of the Pacific Slope." I call it a "work," but it reads like a pastime. Its aim is to win to the land the youth of the West, to make them love the labor of the soil, and, so, to intrust to their many hands the agricultural fortune of the state he has done so much to upbuild. It is distributed throughout all the schools of the state as a class-book. But never was class-book written with such an atmosphere, such a contagion of intelligent enthusiasm. Almost every page has its picture, but its paragraphs are pictures themselves and written with a simplicity only possible when the writer is master of his subject.

The logical completeness of such a service is in the provision of avenues for the expenditure of energies aroused. This is satisfyingly met in the great farm of eight hundred acres at Davis, the sub-experiment and forestry stations at Chico, Santa Monica and Riverside;

[CONCLUDED ON PAGE 4]

Civilization and Conservation

Should Posterity Pay the Cost of Reckless Logging?—By Joel Shomaker

Forest fires have burned over four forty-acre tracts of my land. I estimate the loss, in timber, young forest growth, shrubs and plants, waste in soil and destruction of scenery, at ten thousand dollars. That is a pretty good sum for one man to contribute to the campaign for human civilization and national conservation. It represents the results from careless or criminal use of fire by trespassers on private property.

Five years ago I bought one hundred and seventy-five acres of logged-off or second-growth timber-land. Later another forty were added to the holdings, making a future farm of two hundred and fifteen acres. Then I had something to think about. For I had been a wage-earner for almost twenty-five years. My income from pay-rolls did not pay expenses. Prospects were that when I decided to leave the field of city wage I would be in debt. And it came to pass. For, after many years at the editorial desk, I went to the land with nothing coming from salary checks.

What could I do with a tract of undeveloped land? Back to Nature came the call. I had to do something to support a family of six. My place was situated on Hood Canal, in a most picturesque spot of the Olympic Mountains, in western Washington. The natural flora consisted of rhododendrons, madronas, huckleberries, Oregon grapes, ferns and evergreens of numerous varieties. I decided to establish a Nature nursery and propagate the native plants while adding to them the trees, flowers and vines of other sections of the world.

The beginning of the year 1910 found me located on the land. For the starting of civilization we lived in a house occupying the space of ten by twelve feet. In that was stored a range, kitchen cabinet, cupboard, table and chairs and sleeping equipment for six people. While the rain came down I cut small poles from the forest and erected the framework of a house of seven rooms, now practically completed. Land was cleared and garden planted in February and March.

July 3d a fire was started in the debris left from loggers, in an isolated spot, away from the public highway, and was soon beyond control. It burned for two months. During that time I worked day and night to save property. Fire surrounded the dwelling and threatened the home and family. Burning trees fell within a few feet of my home. More than once we called to the family to get out and prepare to take to the boat for safety. But rains finally stopped the progress of the fires. The air cleared, fog-horns ceased blowing and navigation was once more open.

When the smoke began to disappear and a long breath could be taken without inhaling poisonous vapors, I set to thinking again. All about me were the relics of desolation. Black stumps, burned logs and parched trees and vines presented scenes of destruction. What could be done to bring life to the land? Of course, I did not waste much time in making preliminary surveys of the situation. I decided to replant the earth, restore the soil and rebuild the nursery. And to that end I am now working.

While the fire was burning on my place what was the situation in other districts of the Pacific Northwest? Thousands of acres were burned over, towns laid waste, homes swept away and lives lost in the paths of the fire. Natural conditions favored general waste, for the summer of 1910 will go down in history as the driest season in the Puget Sound region in the last quarter of a century.

Fires the Toll of Man's Own Carelessness

Why do we have forest fires? There are many reasons. Some of them are legitimate, others are questionable. Lack of proper laws for controlling the cutting of timber and providing a system of practical conservation may be given as the direct foundation for losses. Timber is taken out in the cheapest way possible, without any regard for the future of the land or the community. Trees are cut to fall in all directions. Young saplings are broken and wasted. Brush is left where the trunks are cut and the entire country covered by loggers is put in the condition of a danger trap to settlers and home-builders.

The Forest Service, having control of the national reserves, has introduced conservation methods and made the beginning for future wise guidance in handling the resources of timber and water. The plans for taking out mature timber, without wasting young growth, are right and satisfactory to correct-thinking men engaged in logging. The patrol system for guarding trails, camping resorts and frequented places against vandalism and incipient fires, insures safety to property in the reserves and assists in building up the surrounding country. The man desiring to erect a permanent home or make long-time investments in land or its appurtenances, prefers the location near a forest reserve. He knows it will never be a nursery for fires.

Forest fires are becoming synonymous to ignorance or malicious mischief. In some places a man wants to burn over a deer-trail or blackberry-patch. That was customary among Indians and some pioneers of the Puget Sound country. Campers often leave fires to spread over the country without thinking or caring for results. In some instances parties looking for jobs at fighting fires, set the first blaze and, when the burning is well under way, go and offer their services at thirty cents an hour, to help put out the blazing timbers. That was reported, in different sections, while the recent general conflagration was in progress.

Two important questions came to me as the results of discussions or remarks, about the fire on my place. "He should not own so much land," said the advocate of one brand of politics. "He should not be a fanatical conservationist," came the remark from another character of opposite political colors. In those statements, conveying underlying policies, lie the danger to the American people. One force opposes ownership and the other protection of that ownership. One would have all men on the plane of beggary and the other would waste all natural resources in riotous living of to-day. Neither would attempt to provide for prosperity in the future by correct use of present resources and right handling of existing opportunities.

Conservation is a national question. Every person having any real interest in the present and future of this country should have something to say against the waste of timber in the Pacific Northwest. The residents of Massachusetts are as much concerned in conserving the forests of Washington as they are in voting appropriations for warships to protect the commerce of the Pacific Coast. It is just as foolish for the orchardist to cut down his trees to harvest the apples as it is for the logger to destroy the forest to get marketable timber. And the consumers of the entire country are interested in preventing such waste of necessities.

The campaign for conservation should go on until every family in the nation understands the necessity for practising its fundamental principles in every field. There is a limit to the possibilities of soil, water and atmosphere.

Let all know our responsibilities in retaining the sources of supply in order that they may last out their allotted time and leave something for our children.

A Pioneer in Agriculture

[CONTINUED FROM PAGE 3]

and the million-dollar estate donated by Theodore Kearney at Fresno. Intelligent and therefore enjoyable farming is being taught to the boys and girls who expect to live on farms and by farming.

Reputations for success in more than a single field of activity are not in our day readily recognized. A man may be famed for one specialty, a community for one product. Exceptions are both Professor Hilgard and his state. His prominence was geology, as the state was geologic. But his redemption of the soils of the Coast, from their agricultural obscurity was not the earlier, as it is recognized by all scientists to-day as not being the greater, of his achievements. Some of them are dramatic.

Scientific deliberative bodies are not generally animated to enthusiasm, but there was a stir of excitement in one last spring. It was the occasion of the eleventh annual assembly of the Geological Society of America's Cordilleran Section when it was announced that a remarkable prediction had just been fulfilled. A press-despatch was read stating that navigation of the Mississippi River was obstructed by a vast "mud-lump" which had appeared outside the Eads jetties in mid-channel of the South Pass. A member of the assembly arose and electrified the audience with the statement that so long ago as 1875, Professor Hilgard had written the great engineer warning him that his work would be rendered valueless "after twenty-five or thirty years" by this formidable obstacle to navigation. The forecast describing the blockade as inevitable from the submarine fountains of mud was read last April before the National Academy of Science at Washington. The incident is but one of many illustrating the kind of work Professor Hilgard does.

What were his antecedents? What was his equipment? He was born in Zweibrücken, Bavaria, January 5, 1833. (The date given in Johnson's Cyclopedia is an error.) While he was yet an infant, the family emigrated to Illinois, where he was reared and educated mainly by his father, a prominent jurist and publicist. When he was twenty years old, he took the degree of Doctor of Philosophy at Heidelberg. In 1903 he received from that university, on the fiftieth anniversary of his graduation as Ph. D., an honorary diploma reconferring the degree in recognition of distinguished services to the sciences of geology and agriculture.

In the autumn of 1855, when he was but twenty-two, he was called to the position of assistant state geologist of Mississippi. He took charge of the geological and agricultural survey of that state and as its chief geologist published his report on its agriculture and geology in 1865. The unusual character of this report at once separated it from ordinary state documents of the kind. It was recognized as an authoritative contribution to the science. Followed it, three years after, reports on the geology of Louisiana, and "The Geology of the Lower Delta and the Mud-Lumps of the Passage of the Mississippi." After completing the agricultural and geological survey of the state, he resigned to accept the chair of geology and natural history in the University of Michigan. The climate of Michigan proved to be too severe for Professor Hilgard. In the autumn of 1874 he accepted an invitation to give a course of lectures on agricultural chemistry before the University of California at Berkeley, and in the spring of 1875 he was elected to its chair of agriculture.

	Humid	Arid
	AVERAGE OF 466 313 SOILS	
Insoluble Matter	84.031	70.565
Soluble Silica	4.212	7.266
Potash	.216	.729
Soda	.091	.264
Lime	.108	1.362
Magnesia	.225	1.411
Br. Oxid Manganese	.133	.059
Peroxid of Iron	3.131	5.752
Alumina	4.296	7.888
Phosphoric Acid	.113	.117
Sulphuric Acid	.052	.041
Carbonic Acid		1.316
Water and Organic Matter	3.644	4.945
Total	100.178	99.993
Humus	2.700	.750
Nitrogen per cent. in Humus	5.450	15.870
Nitrogen per cent. in Soils	.122	.101
Hygroscopic Moisture	4.65 at 18.50° C	6.28 at 15° C

Table Used by Professor Hilgard to Contrast Soils of Humid and Arid Regions

He has been for thirty-five years a resident of Berkeley; until six years ago, Dean of the Department of Agriculture. He is retired on the university fund, so he is not precluded from teaching, lecturing and writing.

His books form a library which there is not space to detail. Particularly relating to agriculture are the two quarto volumes presenting a thorough investigation of the agricultural features of all the cotton states; translations into several European languages of his "Discussion of the Relations of Climate to Soils," which gained for the author from the Royal Academy of Sciences of Bavaria the Liebig medal for important advances in agricultural science; two quartos, conveying reports on the possibilities of cotton culture in New Mexico, Utah, Arizona and Mexico and on the agriculture of the arid regions of the Pacific coast.

Professor Hilgard's monumental work, however, is his great treatise on "Soils" published by the Macmillans. It is a complete cyclopedia (although not cyclopedic in its manner) of information regarding the various soils of the globe; but, more than this, it is a work of first-hand, original investigation and discovery presenting soil formation, properties and relations to climate and plant growth. Though exhaustive of its subject, it does not contain a page forbidding or "heavy" even to the layman. The author's style of writing, like his personal contact, is simple, untarnished by affectations, the style of a gentleman.

The chemical analyses of Liebig and others awakened inquiry into soils; but practical experience with methods proceeding only from the laboratory showed that they could not be safely adopted. So about the middle of the last century direct soil examination had fallen into discredit. Professor Hilgard earliest suspected that direct investigation was demanded. Slowly, but surely, the Hilgard conclusions gained ground until the methods laid down by him for the proper selection of lands by settlers and their subsequent treatment in farming prevail over the United States, except in the Bureau of Soils at Washington.

The present school of soil specialists was pioneered and founded by him. He has established their groundwork that chemical analysis of soils must be accompanied by physical and mechanical analysis of them in order to attain and tabulate information of practical value. He has rescued soil-analysis from its obscurity and demonstrated its immediate and constant value as a basis for results not otherwise to be obtained.

He has especially explored, interpreted and scientifically developed the possibilities of the alkali lands, lands of little rain and sage-brush, until he has become authority on the application of original but substantiated methods to conditions hitherto unknown. The value of his investigation can be better understood when it is recognized that the arid and alkali territory of the globe is more than all its cultivated lands.

He is easily chief to-day in the features of soil-chemistry, soil-physics and the practical relations of soil to vegetation. He has not changed, but metamorphosed methods of studying earth conditions as connected with edible products and soils in relation to their natural flora.

He is a fragile man, slight of frame, low-voiced, with a winning personal contact, devoid of self-advertisement. "My eyes have now disfranchised me," he half-pathetically remarked the other day; but he is still at seventy-seven an unceasing worker.

His contributions to agriculture may be condensed as follows:

First: Proofs of the necessity of direct physical as well as chemical soil-investigation.

Second: Emphasis on the importance of the native vegetation in the valuing of soils, and the soil conditions causing the vegetative differences.

Third: Recognition of the fundamental distinction between soils of the humid and arid regions and of the exceptional productive capacity of the latter.

Fourth: Demonstration of the origin of alkali lands, their great potential productiveness and the means of reclaiming them for culture.

Some Pressing Problems of American Farmers—II.

Does English Experience Suggest Their Solution?—By John Pickering Ross

A month ago, in Farm and Fireside, I took up some of the pressing problems of the American farmer—the growing distaste for farm life on the part of the younger generation, the trend of country boys to the city, while at the same time lack of employment is a growing city evil, and, lastly, the great national problem of increasing present production in proportion to the demands of our growing population. The proposition was there submitted that the experience of the English farmer might, in large measure, point the way to a solution of these American problems, for the Englishman, farming lands at high rentals, has proved himself eminently able not only to lead a pleasurable existence, but to keep the productivity of his land at a really remarkable standard.

The problem the British farmer had to solve was how to meet the heavy expenses of his farm and his family, and yet maintain the fertility of the soil, which had probably been under the plow already for centuries. His annual rent ranged anywhere between five and ten dollars per acre, and sometimes even higher, and had to be met promptly at the half-yearly rent audit, or his credit would suffer, or if he had a hard landlord, he might even be in danger of losing his farm. Taxes were heavy, especially in war times, and his labor account, including the many little extras he allowed his men, was often almost equal to a second rent. His family expenses were what he chose to make them; and since he was generally very hospitable and kept almost open house, liked to see his family enjoy most of the comforts of life and was by no means averse to getting his share of them, those expenses were pretty heavy. The problem then was a tough one, but he almost invariably managed to solve it, and was found at his death to have left a very comfortable provision for his family.

"Soil . . . under the plow for centuries"

Broadly speaking, the main principles of his farm management were very much as here outlined:

1. His land was well drained with pipe or tile. The cost of this fell on the landlord; the government having a system of loaning money for this purpose, if needed, to be repaid in yearly instalments of about six per cent. of the actual cost, which repaid both principal and interest in a stated number of years. This was generally, though not always, added to the rent.

2. Weeds were extirpated. I think that more weeds can be found in any square mile of Illinois, Missouri or Kansas, the states with which I am most familiar, than in the whole length and breadth of any county in England. Thorn-fences dividing fields were kept closely down to about four feet in height and carefully cleared of weeds and undergrowth. Hedge-row timber was felled; open ditches were scoured out; mouths of drains kept clear.

3. Root crops, such as turnips, carrots and mangel-wurzel, were all fed to live stock. All hay and straw were consumed on the farm. Wheat-straw was used for litter for the sake of the manure, while that of oats, barley, beans and peas, when bright and clean, was fed whole or cut up fine, mixed with hay and fed to live stock. All straw was stacked in the yards and well thatched to keep it from the weather. In the neighborhood of London, where hay and straw were in great demand, the returning wagon must contain a load of stable manure. Most leases contained clauses compelling the consumption of roots, hay and straw on the land.

4. The meadow-lands which were mown, after the aftermath was eaten off by cattle and sheep, were every two or three years treated with a liberal dressing of manure or, when needed, of lime. Pasture-lands were never mown.

5. All implements, machinery and tools were, at the end of the day's work, returned to the sheds. Plows and harrows were alone left out until the job on which they were employed was finished.

6. As many cattle and sheep were raised and bought as the land would carry. All of these, except milch-cows and breeding ewes, were fed for the butcher. Generally speaking, only hogs enough were kept for family use and to work up the manure in the cattle-yards.

7. The most important item of farm management was the strict observance of a fixed rotation of crops. In most leases a covenant was inserted forbidding the growing of any white straw crop two years in succession on the same land, except in specially defined cases. The heavy clay lands, where as a rule sheep did not thrive, were mostly devoted to the growth of wheat and beans, and had a special system of rotation. The course of cropping on the lighter loams, which are most prevalent in England and most closely resemble our own soils, was generally as follows:

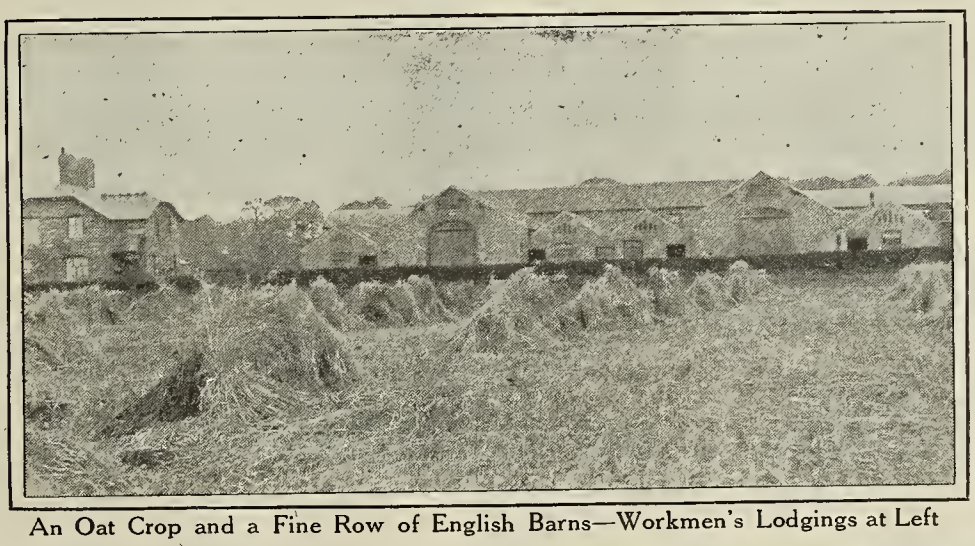
Four-year course—first year: Turnips, white or Swede, sown in the spring; eaten on the ground by sheep; a part carted to the yards for cattle; mostly cleared off in time for winter plowing for barley.

Second year: Barley. When the barley was fairly above ground clover-seed was sown, generally broadcasted and lightly harrowed in. After barley was harvested, clover was mown for hay when fairly grown; aftermath grazed by sheep until well eaten down.

Third year: Clover. This was grazed by sheep and a few cattle, then plowed in and wheat sown in the fall.

Fourth year: Wheat. After being harvested, stubble was plowed in and land carefully prepared for next turnip crop, for which heavy dressings with farm-yard manure in the winter and fertilizers at sowing-time were in order.

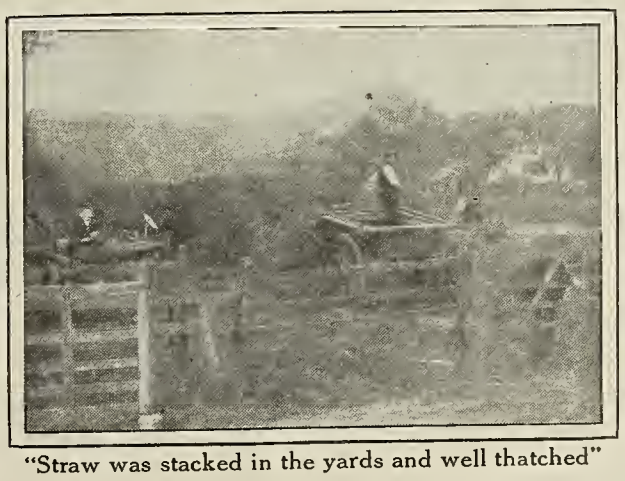
The five-year course differed from the four-year course in that the clover grown with the barley was not mown, but was altogether grazed, principally by sheep, which, being mostly wethers intended for the butcher, were pushed forward as rapidly as possible with liberal rations of meal and linseed-oil cake. This was also done to enrich the soil for the fourth year's crop of wheat. The fifth year's crop was of oats, beans or peas.



An Oat Crop and a Fine Row of English Barns—Workmen's Lodgings at Left

Of equal, if not of even greater, importance than the strict rules of rotation of crops was the maintenance of as large an amount of live stock as the farm could carry. Sheep have always been the great stand-by of the British farmer. In their breeding, rearing and feeding he may fairly be regarded as the world's champion expert. For them a fourth or fifth of the arable land is devoted to the growth of turnips. No care or labor is considered too great to insure heavy crops; and perhaps more study has been given to this than to any other branch of English and Scotch husbandry; and that this is justified is shown by the wonderful number of sheep that a good crop of turnips will feed. The earlier sorts are generally ready by September, when the sheep are turned loose into the fields, or temporarily fenced sections of fields, which they clean up in a very thorough manner. The later sorts are pulled or dug up, the tops and tails removed and they are, except for those that are carted to the yards for the cattle, stored in shallow pits, at regular intervals on the land, heaped up to three or four feet in height, covered with straw and earth in neat, conical piles. In this way they will keep through severe winters. As soon as the earlier sorts are gone, the sheep are brought into these fields, the heaps opened as needed, the turnips are cut up in a special root-cutter by the shepherd and his helper, and fed in troughs to the sheep.

A carefully graduated amount of meal and oil-cake, with racks liberally supplied with hay, complete a diet on which any sheep will "laugh and grow fat." This strong diet is for the fattening wethers. The breeding ewes and store sheep remain as long as possible in the pastures. In very severe weather they are helped out with supplementary hay, straw and oats.



"Straw was stacked in the yards and well thatched"

Youngsters for Future Fattening

Grain, Before Threshing, is Stacked Under Cover

A very profitable branch of the sheep industry followed by some farmers who are liberally disposed to pay for extra labor, which will insure extra large returns, is the feeding of lambs for the spring, and especially the Easter demand. (This business, considered from the American standpoint, has been treated in a previous series in the live stock department of Farm and Fireside.)

With respect to cattle, though their raising was attended with less trouble than sheep, the farmers regarded them as, generally, less profitable, but as indispensable as manure-makers. The produce of the few cows generally kept on these farms, unless very highly bred, were sold as ten or twelve weeks old calves to the butchers. Steers for feeding were bought in the spring, when the pastures were ready for them, out of herds driven through the country to fairs and markets. These were mostly well-bred Shorthorns from Ireland and the north of England; Angus Polls from Scotland; white-faced Herefords and sometimes the small black cattle from Wales.

In many parts of England, especially in the midland counties, the number of cattle that could be fattened on the old pasture-lands is amazing. I have heard farmers boast that they had fields which would feed a big steer and two sheep to the acre. To take advantage of this considerable cattle were required, and since three-year-old steers of high quality and in fair store condition commanded from fifty to eighty dollars, the grazier had to be a man who could command considerable capital.

Off these pastures the most forward of these animals had gone to market by the end of August and the beginning of September. Those which remained, and they were generally the biggest, were chained by the neck and pushed forward with all they could eat in order to bring them to perfection by Christmas. If there were not enough of them to fill the long cattle-sheds, more of like quality were picked up around the country to make good the deficiency. Such prices were in those days, when there was no competition from American packers, paid for this class of stall-fed beef that I fear the fate of Ananias when I say that I have seen hundreds of such cattle sold for from one hundred and twenty-five dollars to two hundred dollars in the open market or at auction.

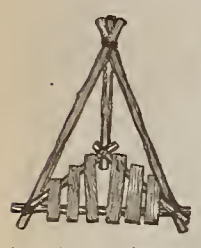
The feeding-sheds on the estates of the most liberal and progressive landlords were specially fitted for the purpose for which they were intended. Solidly built of brick or stone with slate roofs and floors of hard tile; provided with drains leading to a liquid-manure tank, which was emptied when needed and its contents carried to the fields; well ventilated; provided with porcelain-lined mangers and tanks filled with water from a deep well by pipes. In such a home, up to its belly in wheat-straw, a good-natured steer could do nothing else but get fat. Along the wall, in front of the mangers, was an alley leading from the store-house of roots and hay and the kitchen where feed was cooked. Along this alley rails were laid on which a truck, pushed by a man or boy, ran. From it the mangers were filled with food, some cooked and some uncooked, consisting of various kinds of meal, linseed-cake, turnips, finely-chopped straw and hay. The solid manure and litter was thrown into the yard at the back of the shed to be worked up into manure by the pigs, which were kept for that purpose and for family use. All manure was carted to the fields when needed, and at once spread and plowed in. Hogs for the butchers were not regarded with much favor by this class of farmers; their feeding was a distinct business. In fact, hog-feeding has never attained the same importance in England as here and, particularly at the time of my own experience there, prices commanded by mutton, beef and wool left pork in the shade. It was regarded as the poor man's chief animal food, which he raised for himself from the produce of his garden, and of his cow.

Mr. Ross' concluding article will appear January 10th.

Farm and Fireside's Headwork Shop

A Department of Short Cuts, New Wrinkles and Knacks

Solves Post Problems



HERE is a fence anchor that fills the bill under conditions of special difficulty. It serves as either a brace post or an ordinary post, on stony ground where a hole cannot be dug. It is also good where the fence crosses a hollow and the post is always pulling out in the spring when the ground is soft.

Set up three rails pyramid fashion. Wire the tops together well and about a foot from the ground wire poles on the three sides. On these last lay short boards or poles to make a platform. Pile plenty of rocks on it and you have a post for a lifetime.

For corner posts they can't be beat. Set them so that you can fasten your wire to two of the uprights, so you can have the side next to the fence as straight as a post. I put one of these tripods about every two hundreds yards in my fence and use it to fasten my wire-stretchers to, as the anchor will not give a bit. H. H. BROWN.

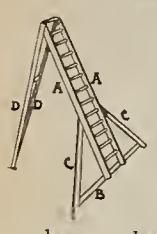
Handy Gate-Closer

IT IS very often desirable to have a gate so built that it can be passed through from either direction and at the same time be the self-closing kind and without anything to obstruct the passageway. Here is a good one.

The arm (A) is nailed securely to the top of the gate, so that it will pass freely above the post on which the gate is hung, even when it is bent down a little by the weight (C). The rope (B)—window-cord is good for this—is run through a hole (D) in the top rail (F), and through a hole in the arm (A) and a knot tied in it to hold it there. Then the weight is tied on, the rope being long enough so that the weight will not strike the rail (F) when gate is open.

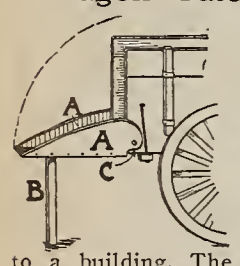
At the hole (D) there should be two grooved pulleys (not shown in the sketch). Spools make an excellent substitute. These are to make the rope run easily. This plan is intended chiefly for light gates that open either way, but it can be used on heavier ones that open only one way to good advantage. For two-way gates the style of latch shown is good. JOS. W. RIGNEY.

Three-Legged Ladder



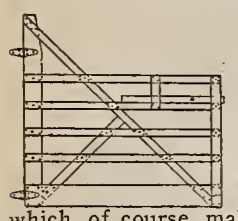
THIS step-ladder is A 1 for picking fruit or for any other purpose. It is almost impossible to upset it and you can get it well under the tree; it is as light, if not lighter than an ordinary step-ladder, and any one who uses a saw and hammer can make one. The main part (AA) is made any desired length out of one-by-four light material. The base (B) is one-by-two and nailed on the under side of the ladder. The braces (CC) are of the same material and extend one inch below base as shown in cut. The leg (DD) is made out of one-by-two pieces tapered off at bottom and nailed together. It is hinged at the top with iron or leather hinges and is three inches shorter than the main part. DAVE CONGER.

Wagon Gate and Platform



THE illustration shows an end-gate I made for my wagon that is particularly handy for unloading coal, corn, etc., as it is not necessary to "get a start" on the load by hand. It is also handy when the wagon must be backed up to a door or close to a building. The side pieces (AA) are pivoted on bolts, as at C. A good stiff prop (B) is hinged on, so that when the gate is lowered it will give additional support, and when gate is up it will swing back close to the gate. Make B a little longer than the exact distance to the ground. F. W. T.

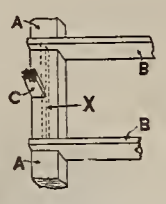
Anti-Sag Gate



IN FORTY years' experience in gate-building this is the best I have seen. In fifteen years it has not sagged a quarter of an inch. It opens into the street and closes a yard, being attached to a stable, which, of course, makes a firm "post." The back of gate is a two-by-six hoard, the slats one-by-four and the bottom piece one by ten. The outer end has two one-by-threes on each side of slats, securely nailed and bradded. This gate is light, hut stiff and stanch. A mortise in post receives end of slide catch. The long hrace (one-by-three) is let in at back of the two-by-six upright and the short brace fitted securely, and all are nailed with wire nails two and one half inches long.

E. STOKES SAYRE.

A Mouse-Proof House

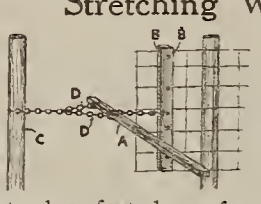


EIGHTEEN years ago my father built a house which was and is entirely mouse-proof. This was made possible by the device described —his own invention.

Cut boards of sufficient width to reach from the sill (A) exactly to the top of the joist (B) and of sufficient length to reach from joist to joist (B—B). Then nail one between every joist against the studding (C). The dotted lines show one board (X) in position. Then, when the floor is nailed down, the house is closed to rats and mice, which always enter between the sill and the floor, and travel between the plaster and weather-boarding to all parts of the house.

If you are about to build a house, tell this to your carpenters. WALTER S. RICE.

Stretching Woven Wire

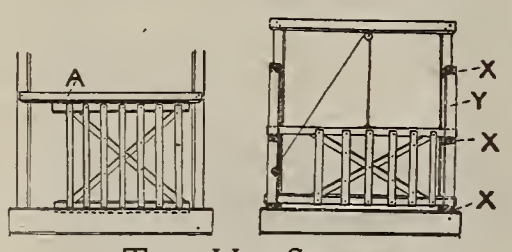


IF YOU have woven wire to stretch, the following device will help you. Clamp two two-by-fours (BB) on the fence with four-inch bolts. Use a tough piece of oak twelve feet long for a lever (A). Bore three holes in it six inches apart and put a plow clevis in each. From the middle clevis run a chain to the two-by-fours (BB). Fasten a chain around post (C). Run a pair of one-foot chains (DD) from this to each outside clevis. Two men can put on enough force to break an ordinary woven wire fence with this device. WM. BOND.

Home-Made Ice

MANY farmers are kept from putting up ice on account of the distance from a place to cut it. Make your own. Fill some five-gallon oil-cans with clean water and let it freeze, dump out the cake and refill the mold. In a really cold snap one can put up ice fast, and one is sure then of its purity.

A. D. ESTABROOK.



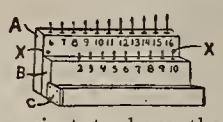
Two Hay-Savers

IF YOU have a horse that roots his hay out of the front of the manger and wastes it, put on one of these gates or racks. They also keep the horse from climbing into the manger with his fore feet. The kind shown at the left is best where the ceiling is low. Nail a two-by-four across the uprights at the front of the stall, about two feet up from the manger, and hinge to this a light frame, the top and bottom pieces of two-by-four and the uprights of lath or the like. Brace with cross-slats about one by two inches as sketched. Hang this frame so it swings in toward the horse. It should be deep enough so it will hit the inside edge of the manger (position indicated by dotted lines) and not swing further forward. The door should be about eight inches narrower than the space between the uprights, to leave room at the left to get at the grain-box.

Where the ceiling is high enough, the plan sketched at the right is possible. The gate in this case is eighteen inches high. Make the top and bottom pieces of the frame a little longer than the width of the stall. Cut them down to half thickness at the ends, where they rest against the uprights. Now nail to each upright three blocks (XXX) about an inch and a half thick, one at the level of the edge of the manger, the second eighteen inches above that, and the third eighteen inches above the second. Now place the frame against the uprights, slats out, and nail a board about two inches wide over the blocks at each side of the stall, making a groove for the ends of the frame to slide up and down in. Run a cord from gate over pulley as shown and tie a ring on the end, to catch over a nail lower down on the manger when frame is hoisted up.

G. G. FRY.

Bit-Box



THIS box keeps a big set of bits in order. The main piece (A) is a two-by-six about eighteen inches long. It is easiest to bore the holes for the bits first, then slope off the top of the piece, as diagrammed. Bore each hole with the next larger size bit. Number each hole with the size bit it contains. I have found it a handy system to number the bits by sixteenths—for instance the three-eighth-inch bit is numbered six, the one-half-inch bit is numbered eight, etc.

Bore holes in a piece of one-by-three (B), slope the top and nail it to A to hold gimlet bits. Number by thirty-seconds—the one-sixteenth-inch bit being numbered two, the one-eighth-inch bit four, etc. In front of this again is nailed a small shallow till (C) in which may be kept bit files, countersinks for screw heads, screw-driver bit and the like. Two holes (XX) are bored through A so that the box can be hung up on nails in some handy place. S. H. W.

A Home-Made Garden Plow

THIS is the best garden plow I ever used. The wheel is off an old washing-machine. The beam (A) is two by four inches and about three and one half feet long. A piece of strap iron (B) is bolted from the beam forward on the other side of the wheel. The plow is off an old cultivator.

One can push this plow easily. It is the thing for preparation for vegetables. Spring teeth can be put on if desired, in place of the plow, for making the ground smooth.

R. C. WILMAN.

Forge for a Few Cents

FILL a large sugar-barrel or a box about two and one half feet square with sand. Scoop out a place seven or eight inches deep and eighteen inches wide for the fire-pot. Bore a hole through the barrel about twenty inches below the top. Then hore a hole up through the sand and run a piece of one-inch gas-pipe through this into the fire-pot. To this connect your bellows. Many blacksmiths are discarding their old bellows for more improved types and thus it is not at all difficult to pick up bellows at a very reasonable figure. C. A. WAUGH.

Skims Off the Weeds

I CONSIDER this the very best implement ever devised for killing that terrible pest, Johnson grass, or any bunch grass. It is simply a drag with a blade behind it which cuts along an inch or two underground, taking every sprout. Two pieces of four-by-four about two and a half feet long make the runners. Two or three pieces of two-inch plank are nailed to runners to make a platform about three feet wide. Two pieces two by four are nailed on top of the slide to hitch team to. An old wagon-tire is sharpened into a blade and bolted to the runners in the rear. This blade must be slanted and set so that the edge comes one inch below the runners. Put on a box for a seat or bolt on a pair of handles. If light material is used, weight down the platform.

Never let Johnson grass get over six inches tall. About three times over the field in the hot summer will kill out the grass.

SARAH BLACK.

Use for Old Buggy-Wheels

OLD buggy-tires may be used for barrel-hoops. They last much longer than common hoops. The best way is to weld them and drive them on before they are cold. They will then contract and get so tight they can't come off. If you have no forge and are not handy to a blacksmith, rivet them.

Buggy-spokes make strong ladder rungs for narrow ladders or for the top part of the fruit-picking ladders where the side pieces come close together. D. W. WEIDLER.

A Fireless Drinking-Fountain

ONE has heard of the fireless cookers, but not of fireless drinking-fountains for poultry. I have made one and it has proved satisfactory. It keeps the supply of water cool in summer and warm in winter. Cold water in summer acts as a tonic, and warm water in winter similarly acts as an invigorator.

In the middle of a wooden box about eighteen inches square and twelve inches deep set a graniteware bucket about eight inches deep. Pack around it securely with excelsior; dampen this and ram it down solid. Allow two inches of excelsior under the bottom of the bucket. Over the excelsior stretch a strong piece of cloth with a hole cut for the bucket. Put a piece of asbestos over the cloth.

The cover is made of four pieces of wood nailed in a square so the center is open, with a two-inch rim to come down around the box. Small slats should be nailed over the opening on the cover to help keep dirt out. The bucket can, of course, be slipped out for cleaning.

Warm the water, pour it into the bucket and give to the fowls. On very cold days a heated soap-stone placed under the bucket helps keep the water at a pleasant temperature for many hours.

MRS. ALICE M. GRAYDON.

Vermin-Killer

WET lye in water enough so it will drop readily. Then drop it around on the sills or rafters where the rats or mice pass. They will get the lye on their feet and when it begins to hurt their feet will lick it off and so poison themselves. H. G. CRAMER.

Headwork Winners November 25th.

Joseph T. Hornsby . . Practical Farm Level
R. A. Galliher . . . . . Foot Sweeper
Wm. Bond . . . . Gate Adjustable to Snow

English Walnuts in New York

"GREAT oaks from little acorns grow." The same is true of English walnuts. Little did Norman Pomeroy of Lockport, New York, think when he planted seven English walnuts thirty-four years ago that it was the starting of a new industry in New York as well as several other states.

Mr. Pomeroy had gone to Philadelphia to attend the Centennial. He took a room and prepared to stay in the great city for a time. When he awoke the first morning in his new surroundings, he noticed a great dark-leaved tree tapping its branches against his window. It was of a kind different from any he had seen. Putting his head out of the window he was still further interested to see the ground strewn with nuts.

He went outdoors and poked about among the nuts that lay on the ground. He sampled them and was much pleased with the flavor as well as the thinness of the shell. The thought occurred to him, "If this nut will grow here I see no reason why they cannot be grown in other parts of the country."

He gathered a few of the nuts in a hand bag and got a neighbor who was returning to Lockport to deliver them to the Pomeroy family. The handbag had a hole in one corner. The neighbor had many children. They spied the nuts and there was but one possible finish to the story.

When Mr. Pomeroy returned there were just seven nuts left, hidden in the lining. These he planted. Seven little shoots appeared, for every last nut had decided to become a tree.

The seven original trees stand near the Pomeroy homestead now, strong and hearty and yielding nuts every year. Each season adds to their wood and beauty. From those seven nuts have come acres of trees. The parent tree down in Philadelphia is no more. A business block now stands where the boarding-house stood in the Centennial days. But from its nuts have sprung many a walnut-grove in several states.

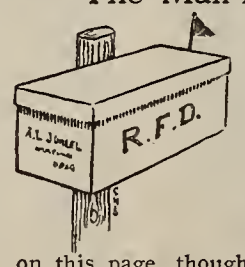
NORMAN POMEROY.

Denmark is a large exporter of canned butter. Italy is of pickles. Why could not these industries be made profitable here?

The leading varieties of rice which are now raised in the Gulf States are the White, Golden Seed, Honduras, Japanese and Gopher.

Since 1875, until quite recently, the French government has debarred the admission of American-grown potatoes. The signal failure of the potato crop, as well as a poor wheat crop, has created a demand for American-grown potatoes at relatively high prices.

The Mail-Box is the Headwork Shop Ballot-Box



YOU are a Headwork Shop citizen.

Three five-dollar prizes are waiting for the contributors of the three best devices in this and every other issue of the Headwork Shop. The prizes are awarded hy post-card vote. Each subscription gives the right to cast one vote, and any one (you, for instance) in the subscriber's family can send it, if the name of the one who takes the paper is mentioned.

The editorial staff decides which contributions are suitable, from the standpoint of usefulness to our readers, for admission to this page. Two weeks after date of issue, we count the votes. You do the rest. We like all the knacks on this page, though we think three of them a little better than the rest. But we're not voting.

What do YOU think?

Whence to Get Humus?

An Interesting Problem in Farm Up-Keep

One of our most valued contributors and subscribers, Mr. R. B. Rushing of Johnson County, Illinois, writes us interestingly of the ways to get humus when the farm manure-supply fails. Please note the good sense of his suggestions as to the ways in which manure bought from the city sometimes is made to cost more than it is worth. His advocacy of nitrate of soda is well worth while considering. Mr. Rushing says:

My experience with using commercial fertilizers and soiling crops as a substitute for stable manure, especially for supplying humus to worn-out soil, has been very favorable. And I am led to believe that the plan will be adopted more in the future, as we must have humus from other sources than just stable manure.

Of course, manure can be produced in very large quantities, but not every man with a very large farm can produce sufficient stable manure to go all over the farm, and consequently he must look to other sources.

I know of several farmers who have entirely abandoned the business of buying manure from the cities and towns because of the cost of the labor in handling it, to say nothing of the price paid for it.

A Manure Fake

And much of this manure is mostly trash and water, and in some cases the manure is thoroughly soaked with water from a hose after being loaded on the car and before weighing, the charge being made according to the tonnage, of course.

I do not mean to say that all manures that are purchased are this class of goods, but I have seen this to be the case more than once. Therefore, I would first say: "Know what you are buying. If first-class manures can be bought at fair prices, I say, 'Good.'"

A much better grade of manure can be produced at home in the form of soiling crops, and produced much cheaper; and by adding some commercial fertilizer to produce extra growth, it will be found much more satisfactory.

If the clovers, cow-peas and other legumes are grown and plowed under during the fall, they will add a large amount of nitrogen, having taken it from the air. This is a great gain, because nitrogen is the most costly ingredient of any manure. If we can add humus and nitrogen with small cost, will it not be easy to supply the other necessary ingredients without much cost? I surely think so.

To Stimulate Quick Growth

If, however, nitrogen is to be added in commercial form, which I have found is often a wise thing to do in forcing a rapid growth, there is no form which I think will act more quickly and in which it may be had more cheaply than in nitrate of soda. This, however, should be put on shortly before it is expected to be taken up by the plants or trees, as it is very soluble and easily lost if not soon appropriated by the crop. It is well to make two nitrate applications in one season; one in the early part and another later on, when the growth is almost at its height. It will then cause a remarkably vigorous growth.

Nitrate of soda should not be put on the land in the fall or winter, except in the case of winter crops for pasture (which is often very profitable), for it would be largely lost in the drainage water before the time for the crop to use it.

Cotton-seed meal, dried bone, fish-scraps, etc., all have considerable proportions of nitrogen in them and are good manures, but they dissolve slowly and should be applied several weeks or months before they are expected to act on the crops.

Phosphoric acid is another necessary part of any complete manure, and should be used in growing soiling crops; also, upon the orchards, vineyards, berry-fields and, in fact, almost everywhere that stuff is grown. It is abundantly found in bones and phosphate rock. The dissolved forms, however, are much more available than those which are merely ground or crushed.

Home-Grown Humus

I have for several years tried the growing of soiling crops on my farm with the addition of fertilizers. This system I think most adapted to my soil and I find I am able to enrich more land than would be the case were I to depend entirely on the barn-yard manures alone.

I firmly believe that there is a place or that a place can be arranged on every farm for some soiling crops to come off in the fall and early spring, and I long to see the time when they will be given the attention that is justly due their production.

Our correspondent leaves us to infer that he uses the nitrate of soda unmixed. Probably experience shows the wisdom of that in his case. But it reminds one of some very interesting facts collated by Prof. Milton Whitney of the Bureau of Soils in his recent Bulletin No. 66, "Fertilizers for Wheat Soils." The data seem to show that in all the recorded experiments in this country, where the results were checked accurately, they favor the mixture of different fertilizers. In 799 experiments in the use of minerals singly—as Mr. Rushing suggests—the average increase per acre in wheat has been but two bushels. But 378 experiments with two-mineral mixtures show an average increase of 4.6 bushels per acre; while 534 experiments with mixtures of three or more mineral fertilizers show an average increase of the wheat crop of 8.9 bushels.

Similar results in the organic fertilizers seem to show that with plants as with animals variety is the spice of life. In 151 cases where organic fertilizers have been used alone (such as dried blood, tankage, fish-scrap, linseed-meal, cotton-seed meal and the like), the average increase shown is only 2.2 bushels per acre, or only a fifth of a bushel more than the increase from the single minerals. In 161 experiments with organic fertilizers mixed with one mineral, the average gain was 3.7 bushels. Organic fertilizers have been used with two or more minerals in 377 experiments, and the results indicate an average gain per acre of 7.5 bushels per acre.

Home-Grown Plant-Foods

Mr. Rushing's faith in the home-grown humus and plant-foods is justified, it would seem, by the fact that 533 experiments with manure and minerals, pea-vine and compost, show an average increase of 7.6 per acre—the best of all.

The average gain in yield from the use of commercial fertilizers in 294 experiments is 2.3 bushels per acre.

These results must not be taken as anything more than suggestive. Many of the experiments were extreme ones which resulted in a loss—purposely. But the results seem to justify Professor Whitney's statement to this effect: "It appears from this that the chances to obtain an increase in yield and the actual increase in yield are greater with two or three substances mixed than with a single substance, both in the case of minerals and in the case of organic fertilizers to which minerals are added. There is, in fact, in the data, evidence tending to prove that the fertilizers have something of an additive value, as the sum of the averages due to single fertilizers approximates the average increase where the actual mixture has been used."

This we take to mean that the value of the mixture is on the whole more than the sum of all its parts. Anyhow, it is worth thinking about in studying out the fertilizer program for next year.

Launch Out After New Ideas

A Maryland friend of Farm and Fireside, "E. A. W.," gives the following bit of wisdom to our younger readers—to the young men who are soon to take charge of the home farm or who plan to work toward the proprietorship of a place of their own:

This is for the young man who means to stay on the farm: Find a farmer that began life by working for others and go to work for him. I would strongly advise every young man to spend at least two or three years in this way, and the farther from home scenes, the better for him. I have no hesitation in saying that, rather than miss the experience to be gained in this and in no other way, it would pay you to go if you could only get your board and clothing; whereas, if you are willing and able and intelligent, you would probably clear two or three hundred dollars each year.

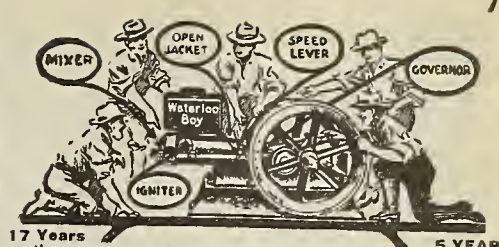
Even if your father is the best farmer in his state, there are many points of inestimable importance that it is impossible to pick up at home.

You want to select up-to-date progressive farmers and work for several.

I may add that no man ever found his proper place and value until he was on another man's pay-roll. E. A. W.

But before launching out, be sure your father can dispense with your help.

If he can, he'll be glad, for the sake of your future, to let you do this legitimate sort of "knocking around," collecting the knacks, the experience and the ideas that have made other men successful.



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ANNOUNCEMENT

Farm and Fireside's 1911 Premium Catalogue

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Hello, There!

You're losing your load!

Your wagon-bed's leaking.

Your milk-can is dribbling and drizzling all over the highway.

Your load of hay is stringing off the rack, and decorating the roadside bushes.

The hogs are jumping out over the top of the rack.

You're losing your load!

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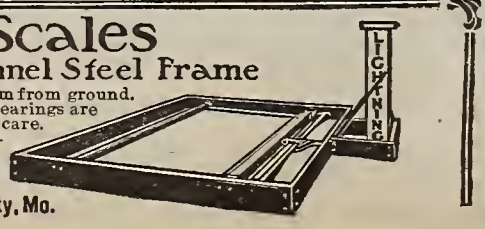

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The Secret of the "Pack"

By C. C. Vincent

We feel that the publication of the series here opened will be the event of the year for every fruit-grower in FARM AND FIRESIDE'S big family. Northwestern growers have taken the cream of the fruit trade. They win by reason of their ingenuity in discovering new and better ways of packing and marketing. These methods will be presented to our readers in clear, practical, boiled-down articles by C. C. Vincent of the Idaho Experiment Station, an expert in every phase of his subject. EDITOR.

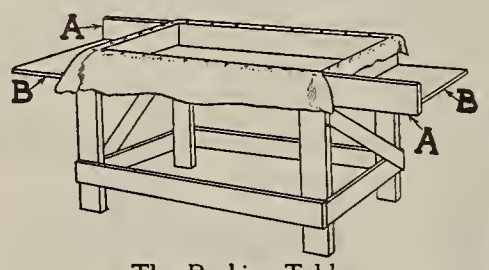
THERE is no information quite as important to the fruit-grower in the East as the proper grading and packing of his fruit. The need has long been felt for more facts, by many of our Eastern growers, on the latest methods of packing fruit as practised in the Pacific Northwest. It is true that the bulk of the fruit produced in the East will continue to be marketed in barrels for some years to come, yet all fancy fruit should be sold in boxes in order to derive the greatest returns. If the East wishes to compete with the West in the production of fancy fruit, it will necessitate the adopting of some of the Western methods.

It will be well for the growers to pay particular attention to the following points regarding the small package:

1. All fancy high-priced apples should be shipped in boxes.
2. Only the best grades are preferred.
3. The box is the only practical package in which apples can be transported with reasonable economy.

It is the purpose of this article, and others which are to succeed it, to discuss the methods in vogue in the West.

When to Pick—The inexperienced grower will have some little difficulty at first in determining just when his fruit is ready to be harvested. This is especially true if several varieties are grown in the orchard.



The Packing-Table

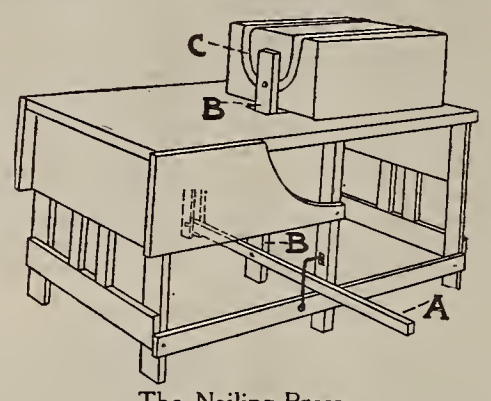
There is a tendency to allow some varieties to hang too long on the tree. The Jonathan falls under this class. The result is a water-cored apple. However, just as soon as the grower learns his varieties, no difficulty should be experienced.

The following points will aid the grower in determining the time to pick:

1. The ease with which the fruit departs from the fruit spur.
2. The color of the fruit, in case of the red apple.
3. When the seeds begin to turn brown around the edges.
4. The flavor of the apple.

The Orchard Crew—To secure competent labor will be one of the greatest difficulties experienced by the grower. Experienced pickers are usually hard to find. In case unskilled men are employed, they should be placed under a competent foreman, whose duty it is to see that all have received the proper instructions before beginning the harvest.

What Ladders to Use—Many types of ladders have found their way into our commercial orchards. A large percentage of these possess special good points. However, for all practical purposes, the writer has found that two styles are all a grower needs in his orchard. A small step-ladder is quite essential for gathering the fruit from the lower branches. The three-legged pole ladder



The Nailing-Press

should also have a place in every grower's orchard, to be used in reaching the fruit from the upper branches.

A lean-to ladder should never be allowed in the orchard. It is expensive at any price, for too many fruit spurs are knocked off, and too many bruised limbs result.

Pails—The grower should see that he has a large supply of picking receptacles on hand. Several types, such as picking-bags, pails, coal-scuttles, etc., are used quite extensively. Personally I prefer an ordinary galvanized pail about ten inches in diameter. A pail of this sort has at least two points in its favor: First, there is no bruising of the fruit in passing up and down the ladder. Second, on account of its size it can be lowered in the bottom of the box, thus reducing to a minimum the bruising of the fruit.

Other Equipment—Just before the harvest begins, the orchard boxes are scattered along the rows. This avoids unnecessary delay in the operation. These boxes are just a little larger than the boxes the fruit is packed in, and made of more substantial material. Cleats are nailed on each end so the boxes can be piled one upon the other without bruising the fruit.

One of the best assets to a well-kept orchard is a low-wheeled wagon. In transferring the fruit to the packing-house, a wagon having good springs and a low broad body is essential to insure careful handling and easy riding.

A roomy packing-house is needed for the storing of the fruit until it can be packed. The essentials of a good packing-house are, first, plenty of light and, second, plenty of room.

The Packing-Table—The table shown in the illustration is a very convenient one for the packing of the fruit. It is about three feet high, three feet wide and four feet long. The uprights are made of two-by-four material; sides one by six. The legs, if they come through the table-top, are beveled off so as to leave no sharp edges to bruise the fruit. The top is raised at the edges so as to make it a sort of tray. This is covered with canvas, which is allowed to sag inside rather loosely. To serve as a double protection to the fruit, rubber hose is nailed around the edge of the tray.

A board (A) projects from each end of the table to make a shelf to rest the box on, and another board (B) projects, continuing the side of tray, which serves also as a rest for the end of the box, which is thus propped up at an angle, facing the picker.

The Nailing-Press—A packing-house is not complete without a nailing-press (see illustration). A man handy with the hammer can construct one for five dollars. The essential part is a foot-lever (A), connected to an upright (B) which pulls a strap (C) tight down over the top of the box and holds the top down for nailing.

Boxes for Packing—It is quite essential to have a large supply of box material on hand. This usually comes "knocked down" to the grower in shooks. An expert can put up from two hundred to four hundred boxes per day at a cost to the grower of one and one half cents per box. Spruce is the best

[CONCLUDED ON PAGE 9]

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The Profit in Alfalfa

A few years ago it was the generally accepted idea that the successful growing of alfalfa was confined to a few especially favored states. That this belief was without foundation is proven by the crops that have been grown in localities where it was thought this profitable forage crop would not grow. For instance, who would have believed that alfalfa would grow and survive the vigorous winters of the Canadian Northwest? Yet such is the case. As to the time of year best adapted to sowing the seed, much depends upon the locality. It is sure, however, that the seed bed must, in every case, be properly prepared, good seed used and properly sown. The Superior Grain Drill, manufactured by the American Seeding-Machine Co., Incorporated, Springfield, Ohio, is admirably adapted for sowing alfalfa. The seed can be sown through the furrow openers and drilled in rows, or it can be broadcasted by detaching the grass seed tubes from the grain tube tops, thus letting the seed fall between the discs. In either case, whether drilled or broadcasted, the discs give the ground an additional cultivation and thus prepare a more mellow seed bed. The Superior Grain Drill is not only adapted to the sowing of alfalfa, clovers and grasses, but all known seeds from wheat to seed as large as bush Lima beans, and in any amount desired to the acre. This machine is manufactured in plain grain and combined grain and fertilizer styles. It can also be had in all sizes with different spacing between furrow openers. Single discs, double discs, hoes and shoes can also be had. Write to The American Seeding-Machine Co., Incorporated, Springfield, Ohio, for their Superior Drill catalogue. Then go to your nearest implement dealer and ask to see the Superior, which is guaranteed to do and to be all that the manufacturers claim.

Gardening

By T. Greiner

Melons After Melons?

Can watermelons be grown on the same piece of ground for several years in succession? A Pennsylvania subscriber says he has had them for two years, and they have done excellently. This seems to answer the question to some extent. On general principles, expert gardeners are in favor of rotation of crops for most vegetables. Rotation is safe, successive planting not always. In practice, however, celery specialists plant celery year after year on the same ground, and they raise good crops right along. Onions are often planted on the same ground ten or a dozen years in succession, and I find that in the melon districts of this county and elsewhere muskmelons are grown right along on the same spot.

Even if blight or other diseases should attack the crop one year, it does not necessarily follow that the attack will be repeated the next year. If you have a piece of ground that seems particularly adapted to growing watermelons, I can see no reason why you should not plant that crop in succession as long as the plants do well.

One thing must be seen to, however. Plant-foods must be provided in proper amounts. Stable manure is the old stand-by. An occasional dressing of lime may be very useful and effective, and phosphates may be needed on some soils.

The choice of varieties has also troubled this correspondent. I would say that Emerald Gem muskmelon, compared with many other sorts, is a rather weak grower and may, therefore, be slightly more subject to blight, but it does very well on strong loam here in western New York. Emerald Gem can be planted more closely (more hills to the acre) than other musk varieties. This is about the best melon in quality and just the one for a locality with short seasons. I have not found a material difference in time of ripening between the Halbert Honey and the Kleckley Sweets watermelons.

How Much Lime to Use

For garden soils, if fresh lime is used—lime that has been allowed to slake just enough to fall to powder and is to be applied before it has changed much from the caustic or hydrated to the carbonate form—one ton per acre is about right. A little more or a little less will not matter. If, however, air-slaked lime, which is carbonate of lime, is used, you may put on double the quantity named. I would advise every gardener who has applied manures regularly to his garden patch or patches, but never thought of lime, to make a trial of this cheap substance for a change.

A circular (No. 10) sent out by the New York State Experiment Station at Geneva, names autumn as the best time to apply quicklime or slaked lime on land used for spring crops. The power of quicklime or slaked lime to injure seeds is gradually lost by lying in the soil. In case of autumn seeding, the lime can be scattered after plowing and then harrowed in very thoroughly. For many crops quicklime may, however, be applied in the spring with little risk, provided it is worked into the soil very completely. In case of very sour soils, the application of lime in the spring is often very beneficial. Carbonate of lime can be applied at any time without risk of injury to crops.

Parboil Bitter Chicory

An Illinois reader complains of bitterness in his witloof. Chicory has naturally a bitter flavor, both in root and leaf. I do not find it so pronounced, however, as in dandelion, and yet we eat the latter, especially when well blanched, in the raw as well as the cooked state. A suggestion of bitterness is not particularly objected to by many persons, although this is simply a matter of individual taste.

Parboiling, however, removes the bitter flavor from both chicory and dandelion. We have used most of our witloof as a substitute for asparagus, and prepared it in the same way. It is parboiled, then mixed with a dressing in which corn-starch, sugar, vinegar and a small part of the juice in which the vegetable was boiled are the chief ingredients. Grated nutmeg is added for flavoring, and if the cook can get the proportions right, the resulting dish is most delicious.

Nothing Like the Meeker

A reader asks me about the Meeker harrow or pulverizer. This, in my estimation, is an almost indispensable tool in any market garden. It consists of four gangs of small disks and a smoothing-board that can be set higher or lower. We run it with one horse, and it will leave good garden loam so smooth and fine that very little, if any, hand raking will be required to fit the land for sowing fine seeds or setting small plants. It costs twenty-odd dollars. It is not advertised and known as much as it deserves to be. Some seed-houses catalogue it. No other garden implement seems to answer its special purpose quite so well.

Let the Fowls Do It

In Farm and Fireside of September 10th Mr. Greiner had a timely word about the "small but dangerous" flea beetles and proposed some remedies, mostly Bordeaux mixture.

My experience has indicated that Bordeaux is of very little use. The only effective remedy I know is to turn the chickens loose in the potato-patch. Of course, in the tomato-garden and with many other vegetables this must be done before they get ripe.

Bolton Hall.

The Secrets of the Pack

[continued from page 8]

box material if it can be secured. Cement-coated five-penny nails are used. Cleats are placed on the tops and bottoms.

Two sizes of boxes have found their way into general usage in order to accommodate the different grades of apples, with inside measurements as follows:

Standard: Depth 10⅞ inches, width 11½ inches, length 18 inches.

Special: Depth 10 inches, width 11 inches, length 20 inches.

The end pieces should be three fourths inch, sides three eighths inch, and tops and bottom one fourth inch thick.

The Use of Paper—In putting up a fancy pack of apples every apple in the box is wrapped; therefore, it is quite essential to be well supplied with paper. Duplex wrapping-paper is preferred. This paper has one side which is glazed or calendered, the other rather rough, which is placed next the apple. The paper should have the following dimensions: Eight by ten inches for the four, four and one half and five tier apples; ten by ten inches for the two and one half, three, three and one half tier apples. Wrapping the apple has several advantages:

1. It checks transpiration.
2. The paper serves as a cushion for the fruit.
3. Extends life of fruit beyond normal period.
4. Prevents the spread of decay from specimen to specimen.
5. The fruit is maintained at a more even temperature.
6. It gives the fruit a more finished appearance.

Lining-paper is used to line the sides of the boxes. It is cut long enough to cover one half the bottom and top of the box. The paper for the standard box should be seventeen and one half by twenty-six inches; for the special nineteen and one half by twenty-six inches. The advantages of the lining-paper may be summed up as follows:

1. The paper adds greatly to the appearance of the box.
2. It is more sanitary, for it excludes dust, dirt and germs.

Layering-paper (cardboard) is placed between each layer of apples. Some growers are beginning to discard the use of the layering-paper for the diagonal packs. However, from our point of view, the use of the paper presents several points in its favor:

1. It holds the apples more firmly in place.
2. The paper gives a smooth surface to start each layer.
3. It takes up excess moisture.
4. Prevents initial pressure bruises.
5. Stops spread of decay.

Grading Board—The apples must all be sorted into their respective sizes before they are taken to the packing-table. Untrained men will have some little difficulty at first in learning to distinguish between a three-tier, three-and-one-half-tier and four-tier apple. To enable them to make the necessary classification, grading-boards are used having holes of the following sizes:

Grading-board for special box:

2½ tier apple—4 inches diameter
3 tier apple—3 2-3 inches diameter
3½ tier apple—3 1-10 inches diameter
4 tier apple—2¾ inches diameter
4½ tier apple—2½ inches diameter
5 tier apple—2 1-5 inches diameter

Grading-board for standard box:

2½ tier apple—4 3-10 inches diameter
3 tier apple—3 4-5 inches diameter
3½ tier apple—3 3-10 inches diameter
4 tier apple—2⅞ inches diameter
4½ tier apple—2 1-5 inches diameter
5 tier apple—2 3-10 inches diameter

(A continuation of this article, in our January 10th issue, will discuss the actual making of the best varieties of pack.)

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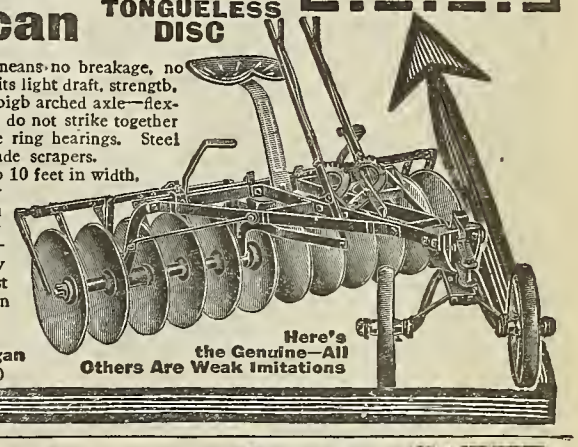

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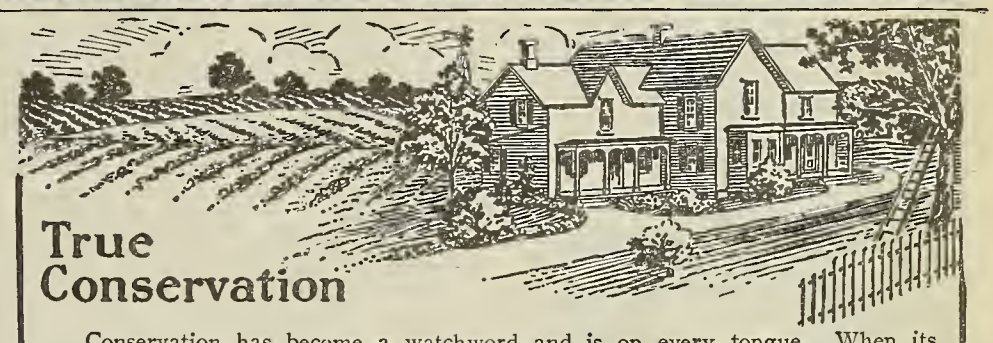

True Conservation

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Live Stock and Dairy

Putting a Crimp in a Feed-Bill

In Erie County, Pennsylvania, a subscriber recently wrote us that he had never fed a balanced ration to his dairy cows, but had become convinced of the importance of studying the feed problem and trying out some experimental feeding with his herd. He had arranged the following ration to feed his fifteen grade Jersey cows, which are of average size for the breed and are producing well for the late fall season:

10 pounds shredded corn-fodder.
30 pounds corn-silage.
3½ pounds corn-and-cob meal.
3½ pounds ground oats.
2 pounds cotton-seed meal.
1 pound gluten meal.
2½ pounds malt sprouts (dried).

That ration was, approximately, a balanced one. We were, however, able to suggest a change in it that would make possible equally good results, if not better, at a saving of over thirteen dollars a month on the purchased concentrates of the herd. The working-out of this economy was so interesting, and the case is so illuminating of some of the problems the stock-feeder must meet, that we think that a discussion of it will be valuable to every reader who is puzzling over the question of the cow and her keep.

The ration as arranged above is considerably heavier in concentrates than is economical, unless the cows are producing quite heavily of milk, carrying more than the average per cent. of butter-fat, even for Jerseys. A feeding rule quite generally accepted as a guide is to give about one pound of concentrates for each three pounds of milk produced. On that basis, this ration would be sufficient for cows averaging about thirty-six pounds a day, an exceptionally good production for a herd of grade Jerseys in late autumn.

There are other points to consider in a good ration, besides the "balance" of it according to the proportions given in feeding tables, and its amount. The portion of digestible matter in concentrates is too large in this ration in comparison with that contained in the digestible portion of the roughage. In other words, while the ratio between the proteids and carbohydrates is about right, the concentrates furnish too much of these elements and the roughage not enough to make the ration most economical. The most approved ration for economy is one in which the roughage contains about six tenths of the digestible nutrients and the concentrates four tenths, for dairy cows.

If one has clover or alfalfa hay in connection with the silage, this same proporiton could be more easily provided for than was possible in this case. Silage, corn-stover and corn-and-cob meal are all very rich in carbohydrates and poor in protein.

To overcome this discrepancy we proposed a change in the ration, replacing the corn-and-cob meal with wheat-bran, reducing the cotton-seed meal and increasing the malt sprouts, as follows:

15 pounds corn-stover.
30 pounds corn-silage.
2 pounds wheat-bran.
2 pounds ground oats.
1 pound cotton-seed meal.
2 pounds gluten meal.
2 pounds malt sprouts (dry).

This makes a total of nine pounds of concentrates instead of nearly twelve in the former ration, yet it leaves the ratio of protein and carbohydrates practically the same; in ours 1:5.7, and in our correspondent's 1:5.5; and in our ration the proportion of digestible matter in the roughage is approximately .6 and concentrates .4, while before the quantity of digestible matter had been larger in the concentrates than in the roughage. The dry matter of the two rations is just about the same, and very well adapted to the size of the cows.

The cost of the concentrates in our ration is about ten and one half cents in place of thirteen and one half cents in the other, at the present prices of feeds. The prices of oats, corn and bran are about on a par in ton lots, and the prices of gluten meal and malt sprouts are about five dollars per ton cheaper than cotton-seed meal, according to current quotations. This change of ration will make possible a saving of about forty-five cents a day, or a monthly saving of about thirteen dollars and fifty cents, and according to the experience of many careful feeders the production should not suffer.

For absolute accuracy the value of the increased stover fed should be deducted from the above figure to express the net saving on the changed ration. Theoretically, on the basis of its feeding value, stover is worth about eight dollars a ton. Practically it has nothing like that value on the market and on most farms is an unsalable by-product. The actual net economy would be close to the thirteen dollars and fifty cents saved on the concentrates.

It is necessary, of course, to take into consideration the individual production and tendencies of the cows in feeding this or any ration. More and more it is becoming understood that individual tastes and preferences must be humored if the very best production is to be secured. B. F. W. Thorpe.

How to Tell a Cow's Age

"What is the rule for judging a cow's age?" Several inquirers have been seeking light on that question. It is not so easy to determine the age of a cow as it is the age of a horse. The most frequent manner is by the general appearance of the cow or the number of rings upon her horns. If she has natural horns—that is, if she has not been dehorned or her horns scraped or polished for exhibition purposes or for deceit—there will be a ring on each horn for every year she is of age.

There is, however, a manner of determining the age by examination of the teeth, as follows:

In the mouth of a calf at birth there are only two incisors, or "nippers," which are milk teeth. At two weeks old there are four temporary incisors; at three weeks old, six temporary incisors; at one month old there is a full set of eight temporary incisors.

One Month

At from six to eight months old the first two incisors, or the central teeth, have become worn down by natural wear so that there are black spots or yellow places in the center of them. At ten months old the next two teeth have become as greatly worn and the first two teeth have become extremely worn and separated by wide spaces. At twelve months all of the teeth, except, sometimes, the outside pair have been worn in the same manner and at fifteen months old all of the eight teeth have been worn down and are separated widely.

Twelve Months

At eighteen months of age the first two permanent incisors appear. They are distinguished from the temporary ones by their greater size and breadth. At two years and four to six months of age the animal will have four permanent incisors and four temporary ones, although the latter four, two on each side of the four permanent incisors, are very small, and there are also marks of wear on the first two pairs of permanent incisors.

Eighteen Months

Two Years and Four Months

At three years old there are six permanent incisors, and the two outside temporary ones are nearly gone. Wear on the two central pairs has also made them much broader than they were at first and not so sharp.

At about four years old—sometimes a little earlier—there are eight permanent incisors or a full mouth and all of the teeth worn except the outside ones. At five years all of the teeth have become worn and there are dark circles with indentations in the center of the teeth.

Four Years Old

It is quite difficult to determine the age after this time by the teeth, except that they become more worn each year, the circles and the indentations within them become more prominent, the teeth, instead of being sharp, become flattened and the space between each of the teeth widens. By the time the animal is ten years old the teeth are at once short, far apart, as broad on top as they are below, with a well-defined circle in the ivory around the outer edge, with a smaller circle in the center of the teeth, inclosing a dark spot.

These remarks apply merely to the incisors, of course. There is a corresponding development of the molars, or "grinders," observation of which is a confirmatory help in telling the age, but usually the incisors will give as correct an indication as can be obtained. Hugh G. Van Pelt.

In the Feed-Lot

Have the feed-lot located on a well-drained slope, to the south of some wind-break, such as a grove of trees, a long shed or on the lee side of some sheltering hill. This not only shuts off the piercing winds, but affords a spot where the sunshine will wield its most potent influence.

Under our conditions here in northern Missouri, I believe the feed-racks and troughs should be arranged so that the stock may eat either in the shelter or out in the open air. Simply provide available shelter; allow the animals to be guided by their own instinct, and you need have no fear that they will expose themselves to weather which will impair them in flesh or be a detriment to their good health.

It is advisable to clean up all of the refuse around the racks and mangers once a day, else it soon freezes there, making it necessary to leave it in the lot until spring, which not only causes more and harder labor, but establishes conditions that turn the feed-lot into a perfect hog-wallow to be waded through when spring thawing sets in.

Try to arrange so that fodder need not be fed in the feed-lot racks or mangers. It's a big task to clean out the refuse stalks, and some of them are sure to slip out and get mixed with the manure, making it very difficult to handle, with the stalks hanging to the fork. Scatter fodder on pasture-land, where the refuse stalks may be left, or feed it near a ditch that needs filling, raking the refuse stalks into it and weighting them down with rocks or heavy pieces of timber and brush.

When the weather is clear and bright, and the ground not soft enough to be damaged by the trampling of the stock, we prefer not to feed in the lot during the day, but to scatter the roughage over the pasture, meadow or field. The refuse thus will not need to be rehandled, as it will serve for fertilizing purposes right where it is left; neither will the manure dropped by the animals need to be hauled away or handled. However, a light harrowing in the spring, to scatter the heaps, will prove highly beneficial by setting the disintegrating elements to work sooner than they would if left locked up in piles of considerable size.

M. Coverdell.

What to Do for Scratches

A Montana subscriber reports that trouble as affecting a valuable horse of his. The advice given him has a general application.

The first thing to do in a case of scratches is to see that the horse stands in a clean stall, where no mud, dung or urine can come in contact with his heels. Failure to attend to this is often a cause of scratches, though they also appear without any external cause, owing to some condition of the system.

Scratches are sometimes very obstinate about healing. The best external remedy that I know of is white lead. Have the sore places perfectly clean and dry, and then see that they are completely covered with white lead. Bind it on with a bandage if it will not stick without one, and renew the application twice a day. Meanwhile feed the animal generously, keep salt in his manger and give him enough bran every day to keep his bowels open. This treatment, if faithfully followed up, should make an improvement in him very soon, though if the case is a bad one it is impossible to say how long it may take to effect a cure.

David Buffum.

Make some of these stormy days profitable by sorting and grading your seed-corn for next spring's planting; then test it a little later on, and you will have put your best foot forward in the initiative step of profitable corn-production.

It's an excellent plan to make a short tour of inspection about the stalls before retiring. The fresh air will do you good and there's almost always something wrong somewhere about the place—a door or a gate open, some of the stock untied or with a foot over the tie-rope.

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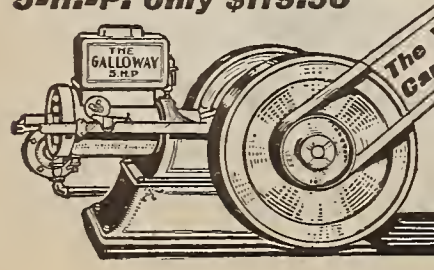

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Live Stock and Dairy

Tricks of the Stockman's Sales

DURING this winter the usual large number of sales of pure-bred cattle will be held. In many cases it will be the first auction offered by the breeder. Whether the sale is to be a success or a failure will depend to a large extent upon the way the animals have been fitted for the sale, the training they have received in showing and their handling on sale day.

Of course, the reputation of the breeder, the amount and kind of advertising he has done, and the time, place and manner of holding the sale are all important factors. However, in this article it shall be the purpose to discuss only the fitting and training of the animals. The writer has picked up some points, in a rather extensive experience, which he believes will be helpful to others and which are here presented. The principles presented here hold good, also, in fitting animals for the show ring and exhibition upon the fair circuit. They apply, further, to cattle for disposal at private sale or to common cattle listed in the ordinary public sale.

It is well to begin by studying the buyer, his wants and his whims. He will want an animal of considerable general excellence, better than anything he has at home. With that in mind, the seller should reserve a goodly number of his best animals for the sale. If his best animals have been sold, the impression will go out that he has only a bunch of culls left and the best bidders will stay away. Secondly, he should be free in the use of the castrating knife. There are cull beasts in every herd. At best they sell for but little more than they would bring on the meat block. If such animals are put in a sale, they lower the average quality of the herd and bidding is apt to be less lively.

One of the first things a buyer will look for is size. To attain a reasonable degree of size in an animal it must be bred right and then fed right from birth. Cattle that have been starved and stunted when calves or yearlings cannot be fed up to the size and bloom they would have attained if they had been pushed from the start.

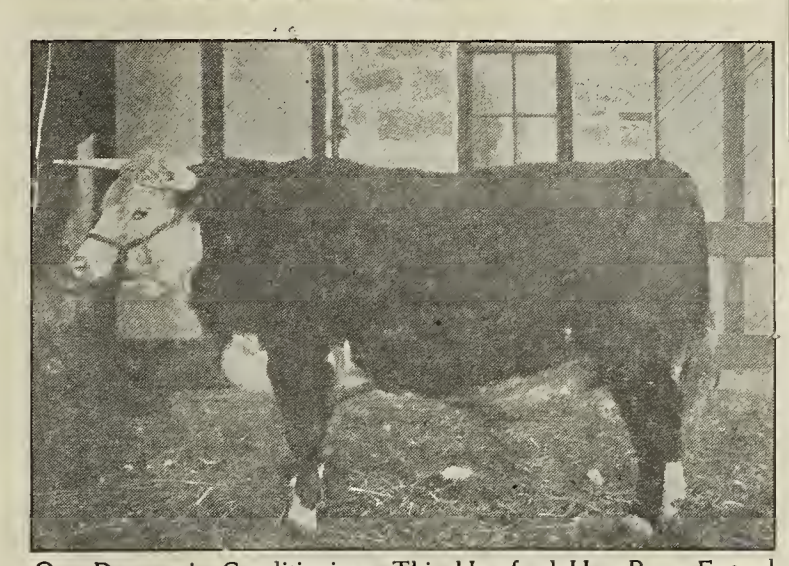
A leading factor in making a successful sale is to have the cattle in proper condition of flesh. Sale reports are full of such statements as: "Some very good individuals were put up, but owing to the fact that they were thin in condition, prices were rather low." Men are constantly saying that they would buy a good animal whether it were thin or fat. The fact remains that they will scarcely look at an animal that is poor. Later, after he has been fattened up, that same man will pay more for the same animal than had been asked previously.

There is nothing marvelous or mysterious in the feeding of the greatest fitters. In fact some of the most successful of them often use the plainest and simplest methods.

Feeding Wisdom

Some time will be required for the feeding and fitting process. Indeed, it is nearly always impossible to fit an animal in less than six months. The degree of finish at which an animal sells best is even higher than that required for the beef steer.

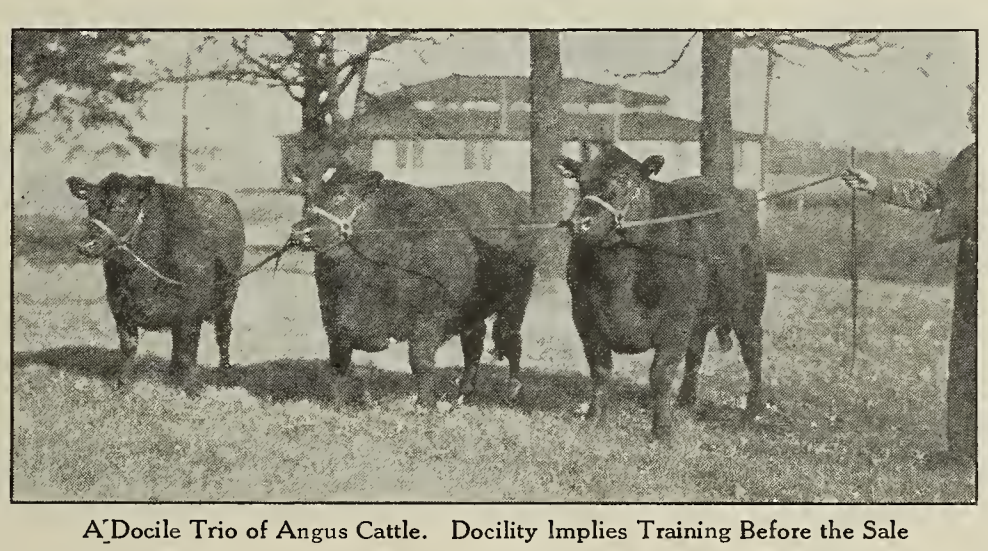
The feed must of necessity be generous, easily digestible and palatable. It must be generous because a large amount of food is required to produce gain. A certain allowance is required for bodily maintainance. Only food above that amount will produce gain. The food must be easily digestible, for if it is not, the digestive powers of the animals will not be able to take care of the large amount needed for good gains. The food must be palatable, because, first, the animals will eat more, and secondly, it will be digested more easily and more quickly. It is an established fact that digestive secretion starts largely as a result of nervous stimulation. When unpalatable foods are fed, there is little or no digestive action. When the food is palatable the digestive organs at once become much more active.



One Danger in Conditioning—This Hereford Has Been Forced Beyond Prime Condition and is "Pursy" With Fat

The commoner feeds generally prove best for the basal part of the ration. For roughage clover and alfalfa hay cannot be beaten. They are particularly rich in protein, which is what young animals most need. They are easily digestible, containing but a small amount of crude fiber. Above all, they are very palatable and are relished by animals of all ages.

As for the concentrates or the grain portion of the ration, corn, which is most satisfactory for a fattening steer, is to be avoided with breeding stock. It tends to form pure fat, instead, at least in part, of muscular tissue, and it is hard on the digestive system. Corn is, however, very much relished by cattle and may be fed to some extent, but caution must always be used. Oats are a common feed, nutritious, palatable and without injurious effects. Wheat-bran is a universal favorite as a feed. It is never fed exclusively, but there is scarcely a stable anywhere, in which show stock are being fitted, where bran is not used. It furnishes the nutrients needed and has a soothing effect upon the digestive apparatus.



A Docile Trio of Angus Cattle. Docility Implies Training Before the Sale

Some other protein food is usually fed in addition. Oil-cake or linseed-cake will usually give the best satisfaction. It gives a softness and glossiness to the coat that no other feed will give. Also, it leaves the flesh in what appears to be a better finished condition. Gluten feed contains a fair amount of protein, but it lacks in palatability. Cotton-seed meal is higher in protein than is oil-meal or oil-cake, but it is not relished so much nor does it have the beneficial effect upon the coat of the animal. Peas and beans furnish an abundance of protein and can be used, except possibly in the last stages of fattening. Wheat fed whole is considered a protein food. It is believed to have a beneficial effect in hardening the flesh. The choice of feeds depends, too, on their relative cost, varying in different localities.

The manner of mixing and preparing the feed is quite important in bringing out the appetizing qualities of the food. Some professional showmen cook the feed, but almost, if not fully, as good results are constantly being secured with uncooked feed. When fed by itself the grain is apt to be too heavy and there is danger of it massing in the digestive tract. It is a good plan to mix the grain with about an equal amount of hay run through a feed-cutter and chopped into lengths of less than one inch. This will add bulk to the grain, insure greater mastication and more complete digestion. The skilful feeder will study his animals and vary the feed to suit individual needs.

Grass or a Substitute for It

Something in the ration should be light and soothing to the digestive tract. Silage, when there is no green grass at hand, will answer very well. When grass can be secured a small pasture where the grass is rather short and nutritious should be preferred to one where the grass is long and watery. The first time the writer worked on a show herd the superintendent made the mistake of keeping the animals off grass. Before the season was over several of the animals were off feed and it became a very difficult matter to get any gain upon them. In England and Canada beets and turnips are used to furnish this soothing "succulence." However, in the corn belt silage is cheaper and will accomplish the same result.

The importance of milk for young stuff cannot be overlooked. It is Nature's own feed and nothing can take the place of it. Many of the best show calves and yearlings of to-day are suckling two nurse cows.

Comfort is next to feed in securing growth and gain. A good soft clean bed will coax the cattle to lie down and be quiet. A great deal of sunshine at this season adds warmth and cheer to the barn. Fresh air without a draft is another essential. Quietness and regular systematic work in feeding count. When an animal is not fed at its accustomed time is worries and frets.

The matter of breaking the animal to lead and stand properly while being shown in the ring or to a prospective buyer cannot be overlooked without loss in dollars. At a sale of Shorthorns recently the animals were brought into the ring in a well-fed condition, but they were not used to being handled. While being sold they frequently tore around like bronchos and drowned out the auctioneer's voice with their bawling. The auctioneer's patience was finally worn out and he said, almost in dismay, "Gentlemen, the fact that the man who is holding this sale has not broken these animals properly is costing him a great deal of money. He has fed them well. He has advertised extensively. He has omitted nothing save training his animals. I hope that the rest of you will take warning from this man's experience."

Educate the Animals

As everyone knows, the best time to train an animal is while he is young. At all events, if they are to be safely broken for the sale, the work must be begun some time before.

Breaking to lead is not a difficult job if good sense and judgment are used. The animal will need to be shown who is to be boss, yet should be in no wise abused. Sometimes a youngster balks and refuses to move. The writer had such a one to handle recently. It was of little use to pull on him and we didn't waste much strength in that way. One held the lead rope while another walked behind and, whenever he refused to move or

[CONTINUED ON PAGE 12]

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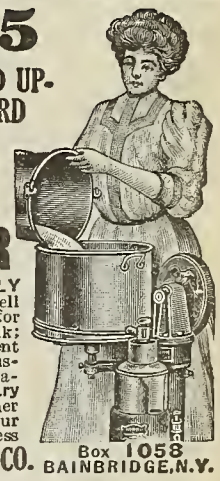

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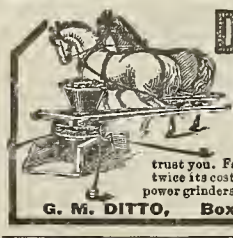

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Farm Journal is made for everyone in town or country who raises poultry, eggs, fruit, vegetables, milk, butter, honey, as well as horses, sheep, grain and cattle. It has the largest circulation of any farm paper in the world, over 750,000 copies. It is devoted to housekeeping, dressmaking, recipes, and bright, fresh reading for boys and girls. It is brief, crisp, condensed and PRACTICAL. No long-winded essays. "Cream, not Skim-milk" is its motto. It is now running a series of articles called "Back to the Soil," true stories of experiences of city people who have changed to country life. They are helpful and intensely interesting. Farm Journal never prints a medical or trashy advertisement, and its columns are an absolutely reliable guide in buying. Most of its subscribers pay five to ten years ahead. It is a special favorite with women. Everyone who has a garden, yard, flower bed or even a kitchen ought to have this bright, cheery, useful home paper. Farm Journal takes pride in being "Unlike Any Other Paper."

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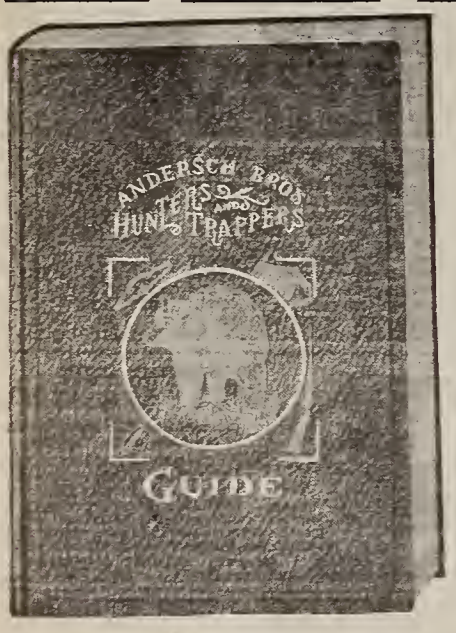

A REVISED and enlarged edition of this splendid book is just off the press and now ready for shipment to our FARM AND FIRESIDE boys. It contains 450 pages, 200 illustrations, durably bound in leather and gold, printed on fine enameled paper. This encyclopedia of hunting and trapping contains all useful information pertaining to hunting and trapping fur-bearing animals, kinds of traps, how and where to set them. **The first cost was $10,000, and its illustrations alone cost $5,000.** Reveals trappers' secrets, how to make decoys, bait, traps, snares, manner of locating animals, skinning, how skins are to be handled, kind of bait to use, where obtained, deer tracks and what they indicate, and hundreds of other interesting and important articles, including bounty and game laws, yearly production of raw furs, giving number and value. Book weighs over two pounds.

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Farm and Fireside, Springfield, Ohio

Live Stock and Dairy

A Movable Feast

WHY not have a portable corn-crib? Those that have tried them in their feed-lots wonder why they ever did without this convenience. To eliminate carrying at each feeding-time it is often desirable to maintain a supply of feed close to the feed-lot. An old wagon or a rail pen is used, generally, but such a plan is not at all handy. The wagon is usually covered poorly or not at all, and the feed, if left exposed any length of time, is likely to spoil considerably. Also, when poultry is raised on the farm, the feed-lot will be one of their haunts, and they will consume and damage feed. The portable crib does away with these troubles.

However, the best feature of the portable corn-crib is its aid in distributing manure, and saving manure losses. In recent experiments at the New Jersey Station solid cow-dung exposed to ordinary leaching one hundred and nine days lost 37.6 per cent. of its nitrogen, 51.9 per cent. of its phosphoric acid and 47.1 per cent. of its potash. Mixed dung and urine lost during the same time about half its nitrogen, half its phosphoric acid and over sixty per cent. of its potash. According to Voorhees, more than one half constituents in manure may be lost by an exposure of less than four months.

The portable crib can be drawn to some infertile spot in the field and the manure deposited there, where leaching rains will mean no loss. You can shift your feeding-ground and distribute the cobs, excrement, etc., over a larger area.

Suppose a farmer has three hundred bushels of corn to feed to a lot of hogs—say 16,800 pounds of grain and 4,200 pounds of cobs. One thousand pounds of shelled corn contain 18.2 pounds of nitrogen, 7 pounds of phosphoric acid, and 4 pounds of potash. One thousand pounds of corn-cobs contain 4.2 pounds of nitrogen, .4 pounds of phosphoric acid and 4.1 pounds of potash. Assuming nitrogen to be worth fifteen cents and phosphoric acid and potash five cents per pound, our 16,800 pounds of grain would contain $55.10 worth of fertility and

The Crib and Its Patrons

our 4,200 pounds of cobs, $3.61 worth. On an average one half that sum would represent the fertilizing value of the manure from the feeding of that corn. If feeding is done directly upon the soil to be fertilized, that amount may be realized; if in an open lot where the manure will lie exposed for half the year, it may not.

The crib shown in the illustration was photographed on the farm of Jacob Schroll, in Hancock County, Ohio. The care he takes in the feeding of these Duroc Jerseys is characteristic of every farming operation on his place.

This crib, inside measure, is about eight feet long, four feet wide and five feet high to lower point of rafters, and it holds approximately one hundred bushels of ear-corn. The runners are of hard wood, two by eight. Both ends of each runner are cut sloping, so the crib can be drawn either way. The joists or floor supports are two-by-eights laid wide side down. The studding and rafters are two-by-fours. To add strength, the side studding extends several inches down along the outside of the runners. A commercial prepared roofing was used, less than one half a square being needed. A small door is built at one end, while a loose board at the top of the higher side provides an opening through which to scoop corn in filling.

This crib can be used when desired as a stationary feed-bin. The runners are then blocked up off the ground to keep them from rotting.

P. C. GROSE.

Why Milk Should be Weighed

MR. H. B. M. BUCHANAN, in the Mark Lane Express, says: "By weighing the milk once a week and making a note of the yield of each cow, those that show the best results could be retained and the unprofitable ones be weeded out of the herd.

"By keeping such a record and breeding from the best, a herd of the best milkers would be the inevitable and profitable result. One instance is on record where a herd of twenty-one cows which at first only yielded five hundred gallons, when the record was begun, at the conclusion of the experiment yielded six hundred gallons, greatly increasing the profit of the herd. The main question to be solved is, 'How can the greatest yield be secured, covering the lactation period?' The yearly result and not that of a day or month or three months is what is desired if viewed from the standpoint of profit.

"The care of the herd has much to do with the yield; a prominent dairyman has found that the currying of the cows during the winter season increases the yield fully ten per cent. for each cow."

Keep the Sheep Dry

AN OHIO subscriber writes that his sheep have a nose discharge—probably due to the influenza quite prevalent in the fall. It helps, in such cases, to place some pine-tar on the nose of each sheep and at the same time from a small spring-bottom oil-can squirt a spoonful of a one-per-cent. solution of creolin up the nose of each sheep.

But, above all, keep them from getting wet. In case they should get wet, never place them with wet fleeces in a close barn. The inhaling of the steam from a wet sheep is well nigh a poison to a sheep. Putting them in an open shed or even leaving the flock out until weather conditions change is far preferable.

The best way is to spend time on prevention. Sheep can stand cold, but not wet.

C. D. SMEAD.

Tricks of Stockman's Sales

[CONTINUED FROM PAGE 11]

hesitated, warmed him up severely in the region of the thighs. We did not beat him over the back and shoulders in an abusive manner, but simply taught him to keep moving. It took only a few lessons.

We always do considerable work in teaching the animals to stand properly. Preliminary training has a double result. It enables the herdsman to study the animal and learn its good points, as well as to train it to stand handsomely. It is a real injustice to a good animal to allow it to stand, during the bidding, in a slovenly manner.

Many stockmen, however, do not virtuously stop with bringing out the animals' good qualities by careful handling. They make use of devices which are not at all to be recommended to the breeder who is anxious to establish a good reputation for satisfactory dealing, but which ought to be understood by every stockman as a matter of self-protection, when he is the buyer.

Standing the animal with its front feet on higher ground makes it appear stronger in the back, neater in the shoulder and higher in the head. When the herdsman is specially anxious about keeping the animal's feet well under it, when the head is held a little low and the animal is perhaps touched up under the belly occasionally, the concealment of a low back is to be suspected. A hollow in the spring of rib just back of the shoulder can be filled to some extent by holding the animal solidly with its head rather high and pressing back on it. If the tailhead is rough the hair is clipped over the higher place a month or two before the sale, which allows the hair to grow enough so that the clipping will not be detected at a glance. Animals that have long or rough coats can be curled or roughed up in such a way that uneveness of form or flesh is covered up to a large extent.

In leading young animals out for sale they may be given two or three feet of rope. The proper place for the leader, as any one would expect, is on the animal's left. With cattle a man may carry the lead rope or strap in both hands if he wants to without breaking show-yard etiquette. There is only one satisfactory way to stand the animal in position. That is to face the animal and hold it with the left hand close to the head. This enables one to watch the animal constantly and to have it under control at all times.

The bulls should be led with a staff. There is no sense in taking chances with even the pampered bull of the show ring.

Some grooming and some washing will be necessary before the sale, but not too much. If sufficient bedding has been used to keep the stock from becoming stained, a brushing every day with a stiff brush will do. Wash the animals, also, once or twice a month and then a few days before the sale. Too much washing removes the natural oil from the hair and makes it harsh and stiff. Horns either add or detract much from the appearance of the animal. Polishing is simple. Scrape with a rasp or some other rough tool, to remove the outer scales, then smooth with emery-paper, and use tan shoe-polish or similar material for giving the finish.

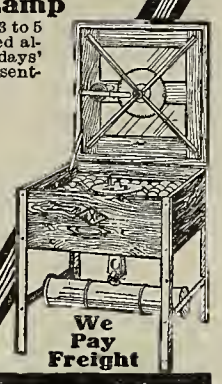
Difficulties will be constantly coming up that will tax the brain of any man. It means hard work, but after the sale one feels that his extra efforts have been paid for.

Made on the Only Correct Principle

Lamp is underneath, in the center. That gives it the most even temperature throughout the egg-chamber. Holds 4 to 8 quarts of oil. Antomatic trip cuts down flame at burner when too hot. Others let heat escape. That's why the X-Ray Incubator needs only

One Gallon of Oil and One Filling of the Lamp

to a hatch, while others need 3 to 5 gallons of oil and must be filled almost every day. Sold on 90 days' trial, guaranteed to be as represented and we pay the freight.



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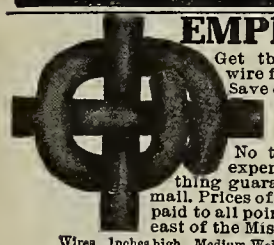

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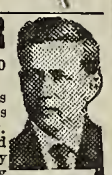

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For 18-in. 14 3-4c for 22-in. Hog Fence; 15c for 26-inch; 18 3-4c for 32-inch; 25c for a 47-inch Farm Fence. 48-inch Poultry fence 28 1-2c. **Sold on 30 days trial.** 80 rod spool Ideal Barb Wire $1.55 Catalogue free.

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Poultry-Raising

One Woman's Success

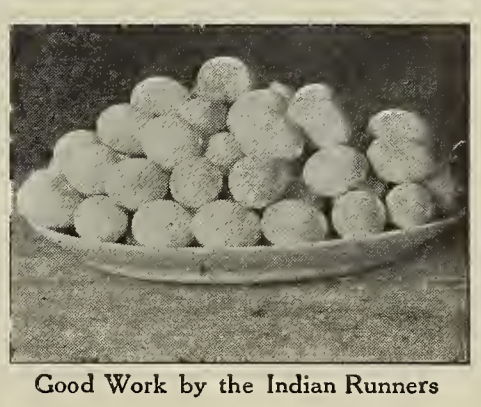
NEAR Auburn, New York, lives a modest but ambitious little woman whose success in poultry-work should be an inspiration to many another, who, from motives of pleasure or necessity, wishes to earn a livelihood. This work enables a woman to do her work on her own premises, and to keep her children together in the home under her own care—two immense advantages to the feminine mind.

Mrs. Andrew Brooks started out some six or seven years ago, laying the foundations of her work wisely, beginning in a small way with two breeds of utility birds, the barred Plymouth Rocks and Indian Runner ducks. She bred from very productive layers of large, attractive eggs, testing the flock by trap-nest methods.

She established a reputation for strictest integrity in dealing, and for first-class quality in products. To-day she has a well-established demand for first-class eggs and dressed poultry for the table, for eggs of both breeds for hatching, for day-old chicks, and for breeding fowls and ducks, all at good prices. It has taken watchful, unfailing care and much energetic labor on her part, as she attends to every detail in person. But the rocky places are safely past, and her work is firmly established on a paying basis.

She has done much to place the best strain of Indian Runner ducks before the public, by intelligent correspondence with and for prominent agricultural and poultry papers. She has, perhaps with the exception of one well-known sister worker for the good of this breed, done more than any other one person to perpetuate and maintain the wonderful utility qualities of these ducks.

Owing to the attempts of the fanciers, who care nothing for the practical utility qualities of this money-making bird, to establish a standard that would deteriorate the breed in at least two important points, much discussion through the poultry journals has been aroused. Mrs. Brooks and her fellow-workers in the cause seem to be in a way to win in the controversy with the revision committee, as right usually does in the end. In that case the correctly bred Indian Runner will continue to lay in the neighborhood of two hundred eggs per year of the large pearly-white, tempting-looking variety shown in the photograph. The fanciers' product lays a green egg that is not very marketable.



Good Work by the Indian Runners

These ducks, fed as this enthusiastic worker does, are sure to lay all winter. She gives them three feeds a day, two of which consist of a wet mash composed of one part bran, one part middlings, one part cornmeal, two parts or even more of chopped green stuff—vegetables or preferably chopped and steamed alfalfa—and one half part of meat-meal or ground bone. They always have finely ground quartz for grit and an abundance of clean drinking-water in deep earthen crocks not easily tipped over and deep enough to admit of their keeping their nostrils and heads in good condition. They are always fed at night on whole corn, all they want, and a supply of coal-ashes is in reach, for which they seem to have a special liking.

Last year Mrs. Brooks did an eleven-hundred-dollar business, by her own unaided efforts. This year her returns will far exceed that, though as the year is not yet ended she cannot name the exact amount.

She runs three incubators and several outdoor brooders. Her houses are not large, her whole outfit being simple and inexpensive. Much credit in this work is due, of course, to her keenly intelligent methods, her good judgment in advertising and to her unfailing conscientious methods of dealing with her customers. MRS. E. G. FEINT.

How to Tell Fowl Tuberculosis

SEVERAL letters have come from subscribers in widely scattered regions asking advice in cases of what seems to be avian (fowl) tuberculosis. This disease is not so serious or prevalent among poultry as among other stock, but it seems sufficiently wide-spread to make it advisable for every poultryman to know about it, so he can recognize it and take measures of protection.

Dr. Frederick S. Jones of New York State Veterinary College has prepared for our readers the following statement of the symptoms and treatment of this disease:

The symptoms of avian tuberculosis are emaciation, with good appetite, eyes clear. Often there is diarrhea, marked weakness, lameness, later stupor and death. On dissection of the dead fowls, the liver will often be found covered with tubercles (little lumps or nodules) grayish-white in color, ranging in size from that of a pin-point to that of a large pea. The spleen and kidneys are often attacked. The intestines are also often covered with these small tubercles, as is the mesentery (the thin membrane that runs between the intestines and the back, and holds the intestines in place). In fact, any organ of the body may become the seat of the disease, but it is to be looked for first on the organs named. The lameness, if present, is caused by an infection of the joint.

The disease is spread by bacteria cast out with the feces of the sick ones. These bacteria are picked up, on food or otherwise, by the other fowls, and they pass, generally, from the intestines to the liver.

There is not much use trying to treat the sick fowls. They will probably be too far gone to save, anyway, by the time the disease is noticed. I would urge the killing of all sick fowls and the burning of the carcasses, the confining of the healthy fowls to a clean coop and a thorough disinfection of the old coop. Keep the well fowls off the runways that were occupied by the sick fowls.

A good disinfectant is one part crude carbolic acid, one part commercial sulphuric acid, forty parts water. Mix slowly, a little at a time. It is likely to spatter if mixed all at once. Spray coops, nests, perches and ground around the houses. Boil the food and drinking-pans. Be very careful, of course, to get no acid on yourself or on any of the fowls.

If you suspect the disease, but are not sure of it, send a carcass, safely packed, to your state experiment station for diagnosis. This will be made free of charge, at least at most stations having regular poultry departments. It would probably be best, however, to write the experiment station beforehand, so they can inform you whether they can handle the case, and if so, how to ship the carcass.

How Many Eggs Do Guineas Lay?

I HAVE seen it stated that a guinea-hen will lay thirty to seventy eggs in a season, but from my experience with guineas I thought the estimate too low. So last spring I decided to keep an account of the eggs laid by two pearl guineas and one white one. I am sure that my average would have been much better if I had not included the white hen, as she has done a very poor business at laying. However, as her account was not kept separate, I do not know exactly how many eggs to credit her with.

The early season was very unfavorable for the guineas, as it was cold and rainy and there were not many insects for them to hunt. They did not commence laying until fully a month later than usual for them.

At this writing (early in November) I have the three hens credited with one hundred and eighty-four eggs. The two pearl hens were broken up twice. Once they had only a few eggs. The other time they had laid a full setting and had been on them for nearly a week. A conservative estimate would put the eggs lost in this way at forty, which added to the one hundred and eighty-four makes two hundred and twenty-four eggs, or practically seventy-five eggs each, and two of them are still laying.

Under favorable conditions it is likely that a guinea-hen will lay one hundred and twenty-five eggs in a season. She will lay at least twice her market value of eggs in a single summer. She will make her own living except in the worst winter storms. She will gather gooseberry-worms, potato-bugs and other insects and worms that injure crops. Some of these the chicken-hen will not eat. A. J. LEGG.

A Cure for Sorehead

ONE half teaspoonful of vaseline and ten drops of carbolic acid, made into a soft paste with sulphur and rubbed on the sores, is a sure cure for sorehead, or chicken-pox, as some call it. I lost many chickens and tried many things before discovering this remedy and it has given me fine success.

MRS. E. P. HAMRASY.

Don't use soap that has resin in it to wash your white birds for the show pen. Sticks the feathers up too much.

Drive the scales from the legs of your birds by using plain gas-tar. Some other things are pretty good; this best of all.

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Lots of eggs if you feed green bone fresh cut. Its egg-producing value is four times that of grain. Eggs more fertile, chicks more vigorous, broilers earlier, fowls heavier, profits larger.

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makes bone cutting simple, easy and rapid. Cuts all bone with adhering meat and gristle. Never clogs. **10 Days' Free Trial.** No money in advance. Don't buy a cutter without trying it. Send for free Book.

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Double cases all over; best copper tank, nursery, self-regulating. Best 140-chick bot-water Brooder, $4.85. Both ordered together, **$11.50. Freight prepaid (E. of Rockies).** No machines at any price are better. **Satisfaction guaranteed.** Write for book today or send price now and save waiting.

Belle City Incubator Co., Box 100, Racine, Wis.

More Eggs in the next thirty days

Feed your hens green bone, cut with a Stearns Bone Cutter. We will lend you one to try, free, for the next 30 days. If your hens don't lay lots more eggs, don't pay for it. Write to-day for catalog and booklet, "How to make poultry pay."

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and Almanac for 1911 has 224 pages with many colored plates of fowls true to life. It tells all about chickens, their prices, their care, diseases and remedies. All about Incubators, their prices and their operation. All about poultry houses and how to build them. It's an encyclopedia of chickendom. You need it. Only 15c.

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Made in .25, 30-30, .32 and .35 Remington calibres.

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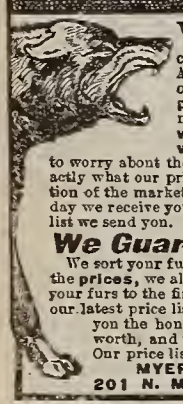

WE want to prove to you at our expense, that we pay you higher cash prices than any other house in America. We want to show you where our price list quotes the **very highest prices** you can get. We give you the money that your furs are actually **worth**—not visionary values—but the **very highest prices.** You won't have to worry about the market. We do that and pay you exactly what our price list shows regardless of the condition of the market, even if there is a big slump on the day we receive your shipment. We guarantee the price list we send you.

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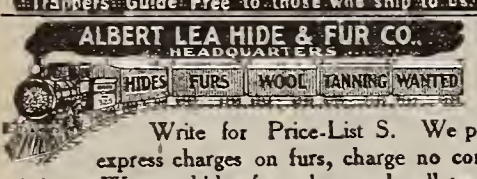

Write for Price-List S. We pay express charges on furs, charge no commission. We tan hides for robes, and sell traps.

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Farm Notes

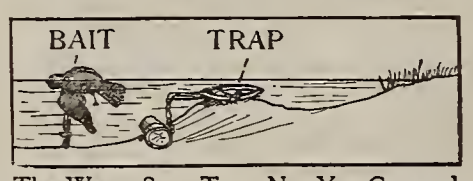
Lore for the Trapper

WITH furs at good prices the boys on the farm may earn several dollars through the winter without interfering with other duties. Mink, fox, 'possum and 'coon are the most common animals to be found in the middle West. The muskrat is also fairly valuable for its fur and is easily trapped.

Steel traps ranging in size from No. 0 for rats to No. 3 for foxes should be used, and the best are those known as "jump" traps. The fur of one mink will pay for one or two dozen traps, and if properly cared for, they should last several seasons. When not in use grease them and hang where they will keep dry. When you are ready to begin trapping, smoke them well with cedar or hemlock chips to destroy any suspicious odor.

Wild animals are becoming more wary as they are being hunted by man, so we must conceal the traps and destroy all trace or scent. Nice, shiny traps set in plain view will never catch anything unless it be the old house-cat. In trapping for mink or fox I prefer a water set, as in this way the trapper leaves no scent around the trap, and these animals come to the water frequently. The natural food of the mink is rabbits and birds, and bird bait is the best. Select a place along the bank of a pond or creek, and about a foot from the bank place the bait, either by sticking it on one end of a stick thrust into the mud so that the bait will appear to be floating on the water, or on a stump or rock a few inches above the water.

Half-way between this and the bank set the trap so that the pan will be barely covered with water, and this may be done by raking up a little mound of mud if the water is too deep, or scooping out a depression where shallow. The trap should be covered with moss or turf in such a way as



The Water Set—Trap Not Yet Covered

to resemble a stone or tuft of grass-covered earth, in such a way as to allow of the springing of the trap. The mink will see the bait and also what he thinks a good place to step to reach it.

These water sets should be made where there are signs of the animals, but by using scent bait they may be attracted several rods. Pieces of fish or eel put into a bottle, which should be left unstoppered for two weeks, will decompose and leave a strong smelling oil which is strained off and used by putting a small quantity of it on the stump or rock instead of the bait. This will attract 'coons as well.

When you make a set in the water, wade in a rod or two from the set and throw water over all places touched by the hands. The trap chain and drag should be covered with water, and if a stake is used, it should be driven in deeper water, away from the bank. The advantage of the drag over the stake is that the animal will try to escape, taking with it the drag, which can be easily tracked for a few rods, where it will likely become entangled in the brush, whereas if the captive finds himself firmly tied to the stake, he will in some instances gnaw off the injured foot and escape. You must be sure that the clogs are of solid wood, for you may catch a 'coon and he will very easily gnaw the chain from a piece of soft wood.

The fox or 'coon may be trapped for in the same manner as the mink, only that the distance from the bank should be greater for the fox. In many cases when trying for one animal the trapper catches another. Another good set for mink is to make a hole back in the bank around old heaps of drift or logs, place the bait at the back of this hole with the trap set at the entrance, concealed with leaves or chicken-feathers. If you find a den, they may be caught by setting at the entrance.

The habits of the animal will suggest places for settings. The mink is always found near water, and a favorite haunt is about drifts, hollow logs and caves. If you find a hollow log open at both ends, set a well-concealed trap at either end with bait about the center of the log inside, and you will be almost sure to catch some animal.

The 'coon's fondness for "cooning" it across logs suggests a good setting. Cut out a big chip on top of the log, set the trap in this flattened place and cover with rotten wood or moss, leaving the point over the pan the smoothest, for all animals prefer to step where it is smooth. You will need no bait for this set. Drive a stake in the bed of the stream to reach a little above the log, and loop the chain around this so it will slide down as soon as the animal is caught and makes a leap to get away. The chain will slip down to the water and the 'coon will be drowned, thereby preventing self-amputation.

The fox is most cunning and difficult to trap, but water sets and what are called blind sets in trails known to be frequented by them are sure methods. If setting in trails, make a depression and cover all with leaves. In this case follow the trail when going to and from the trap, as the fox will not be suspicious since he is accustomed to the human scent along paths.

All three of these animals, and more especially the 'coon, are fond of pleasing odors, and a good "medicine" bait is made of four parts each of sweet-oil and honey to one part oil of anise. The scent-casters of the muskrat have also been found valuable. Do not put this on the trap, but where it will lead the animal into the trap.

Skin a 'coon or fox as you would a beef and dry in the shade where there is a good circulation of air. The mink-skin should be "cased"—that is, the skin should be slit from one hind foot to the other and then removed by pulling over the head. It should be stretched on a tapering board. Care in curing skins is just as important as skill in trapping, as condition makes big differences in grades and consequently in prices.

H. F. GRINSTEAD.

Here's a Marketing Chance

MAKE the most of your opportunities if a construction gang is encamped on or near your farm. We have no trouble in selling to the commissary department all kinds of fresh vegetables, the men preferring them from the garden rather than from the tin cans. Railroad work, canal, road or other big government jobs offer such opportunities. The opening of a new factory often opens good marketing chances to the farmer who goes after the new trade with diligence from the first. Study the nationality of the workmen and cater to racial tastes. Greeks are very fond of chickens and sheep, the Italians love stews, and fresh fish are always in demand. In regions where fish are at all plentiful, a boy by taking a forenoon off can make quite a little money catching and selling fresh-water fish. Watermelons would, of course, appeal most to the negro, as well as poultry.

WM. A. FREEHOFF.

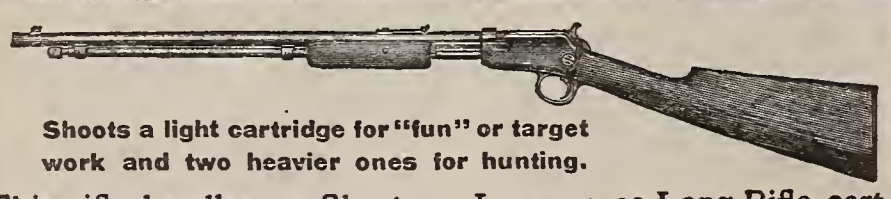
Careful With That Cement

THERE are many farmers who will desire to put in concrete during the winter months, but for fear of freezing may hesitate to begin the work. My experience has shown that frost can only work ruin to cement before it is set.. Keep it from freezing until it is set and you have gained the day.

Last winter I put in a cement foundation for a house the first of January when it was freezing cold every night. The water with which the cement was mixed was heated in a boiler and the cement laid while it was warm. At night it was covered with boards over which was piled a lot of stable manure. Of course, there was no freezing, and the foundation to the house was as good as if put in during July or August. If manure is not available, a covering of straw or leaves will serve to keep from freezing should the weather not be extremely cold. If the shape of the job permits—in flooring a cellar, for instance—keep a fire in a small stove or metal protector. Perhaps you can use several fires to advantage. After a day or so there will be no danger, as the cement will have become hardened. W. D. NEALE.

WINCHESTER

MODEL 1906 .22 CALIBER
Extra Light Weight Repeating Rifle



Shoots a light cartridge for "fun" or target work and two heavier ones for hunting.

This rifle handles .22 Short, .22 Long or .22 Long Rifle cartridges without change of adjustment. It's a take-down and a very handy, all-around small caliber repeater. Examine one and you'll agree that it's the biggest rifle value ever offered.

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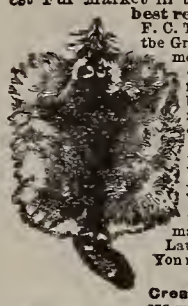

F. C. Taylor & Co., who own and control the Great Fur Exchange Building, have more money invested in building and equipment than all other St. Louis fur houses combined. They have better facilities, enjoy a greater demand and handle more furs than any other concern in America.

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Cattle or Horse hide, Calf, Dog, Deer, or any kind of skin with hair or fur on. We make them soft, light, odorless, wind, moth and water proof, and make them into coats (for men or women) robes, rugs or gloves when so ordered.

Your fur goods will cost you less than to buy them, and be worth more. Send three or more cow or horse hides in one shipment from anywhere east of Denver and we pay the freight both ways.

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Get more for your furs, no matter where you are. **We pay twice as much as home buyers** and from **10 to 30% more than any other dealer anywhere.** Our big, **free,** illustrated catalog tells why and **proves** it by letters from shippers in **every** State. Send for it today—**now**—before you forget. We'll send with it also our **free** Trappers' Guide, tells how to trap and care for furs. Also our big **free** price list and market report. **All sent free for asking and all different from anything you ever saw.** CORRY HIDE & FUR CO., 36 Main St., Corry, Pa.

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Without Cost

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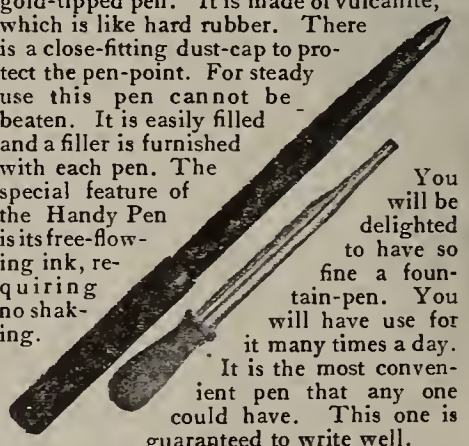
THE Handy Fountain-Pen is the best pen made for usefulness and wearing qualities. It has a fine, well-made gold-tipped pen. It is made of vulcanite, which is like hard rubber. There is a close-fitting dust-cap to protect the pen-point. For steady use this pen cannot be beaten. It is easily filled and a filler is furnished with each pen. The special feature of the Handy Pen is its free-flowing ink, requiring no shaking.



You will be delighted to have so fine a fountain-pen. You will have use for it many times a day. It is the most convenient pen that any one could have. This one is guaranteed to write well.

Our Offer We will send you this wonderful fountain-pen by return mail if you will send us only three one-year subscriptions to Farm and Fireside at 50 cents each. Send the subscriptions to

FARM & FIRESIDE, SPRINGFIELD, OHIO

Farm Notes

Little Soul-Searchers

WE SPEND some little money to send missionaries to China, India, Africa and even Mexico, while the Christian people of the United States spend two billion dollars for intoxicating liquors, and four billion dollars more to keep up the poor-houses, jails, law courts and insane asylums made necessary by intoxicating liquors. Yes. Your uncle wanted to ask some kind of a mean question about this, but he has forgotten what it was.

If the farmer sells pork for seven and a half cents a pound and pays twenty-four cents a pound for bacon, how long will it take him to get rich selling pork?

Why is it that when we do something mean we want everybody and the local paper to keep still about it, but if we raise a squash which weighs two hundred pounds, we expect the state papers to get up and howl?

Homely girls are lucky; they will not be much talked about.

The devil may find something for idle hands to do, but some men seem so lazy that even the devil must get disgusted with them.

If all babies were as pretty as their mothers think them, the world would be full of angelic cherubs. A. F. B.

How to Read Your Farm Paper

THE first lesson we must learn in life is that we know but very little, and the sooner this lesson is learned, the sooner we will begin to get a real foothold on the path of life. Wisdom is life.

We have no excuse whatever for remaining ignorant of the fundamental principles of our own calling, agriculture. Every state has its board of agriculture to encourage us. We have our agricultural colleges, our farm institutes, our farm papers, our experiment stations and our department of agriculture at Washington to teach us the underlying principles of successful farming, and it is up to us as a body to take advantage of these different agencies, to study their findings and profit by them. From parents and neighbors, from experience and observation, we get the essentials of farming, but for the new ideas, the successful innovations, we must go farther. We must delve into print. The fundamental natural principles that underlie farming we can know and understand only as we learn them by a careful study of our farm journals and the bulletins that are issued gratis by our state experiment stations and our national department of agriculture.

Some farmers read their farm papers too indifferently. We should study our farm papers as devotedly as a good Moslem studies his Koran. Some articles that we may think of little value to us may later prove the most valuable. To the one who does not read, yet is of the opinion he can farm successfully, I would advise the careful study of the fundamental principles of some particular phase of farming he may be interested in, so he may be able to see how little he knows about what he is driving at.

Take the hog industry as an example. Not one farmer in ten understands the fundamental principles of the industry—the value of a balanced ration or how to balance a ration. It is poor policy to imagine we know it all.

Farming Hints Count More Than Politics

We must not refuse to read our farm paper because our editor may hold different political views from ours. A political hobby is a frail bark to sail life's tempestuous sea in. Our political policies are full of fallacies. Let us review the past. In the campaign of 1896 the Republican Party told us that should we have a free and unlimited coinage of silver we would have a fifty-cent dollar. That is, one dollar in silver would just buy fifty cents' worth of bread and meat. To-day we have a fifty-cent dollar. One dollar just buys fifty cents' worth of bread and meat. It is true we have had several years of industrial prosperity that has meant much to the rich. To the poor it has meant plenty of hard work, something to eat and a few clothes to wear—nothing more. For wages have not advanced in proportion to the necessities of life. This prosperity was a prosperity brought about by a regulation of tariffs. But the prosperity that we are looking for is the prosperity brought about by science well applied—the Christ science that takes the five loaves and two fishes and feeds the hungry multitude—the science that takes the small farm and makes it produce four times as much as it did under hit-and-miss methods.

The Democratic Party told us unless we had a free and unlimited coinage of silver, land values would continue to decrease, wheat would never reach the dollar-mark and that horses always would continue low in price. But land values are increasing, wheat has passed the dollar-mark, horses are five times higher in price than they were. Yet we continue the gold standard.

The Socialist Party told us that improved machinery was fast supplanting the hands of man, that the rich owned the machinery and the facilities of making a living, and unless we had government ownership of the facilities of making a living we would soon become serfs in the hands of the rich. They also figured that should all hands be put to work that the work of the world could be done up in four hours out of each twenty-four. But we cannot get men and machinery enough to do the work of the world. When we dip into the future, far as human eye can reach, and see the vision of the world and all the work that is ahead of us before this world becomes a paradise to live in, we can readily see the great demand for more men and more machinery and we need not fear that improved machinery will make slaves of us. It will make free men of us all.

The Prohibition Party told us that we never could free ourselves of the drink evil unless we elected a Prohibition ticket to office. But you see the South has gone dry—a dryness brought about by no one political party.

I point out these political fallacies to you to prove to you that your welfare is not centered in some one political hobby and that you should not refuse to read your paper because your editor may hold a different political view from yours. One should read politics some, study politicians very carefully, but above all study scientific farming, for in science is your welfare centered.

JOHN A. SHULTZ.

Worth Attending

Eastern Meetings

January 12-13. New Hampshire Dairymen's Convention, Woodsville.

January 18-19. Connecticut Dairymen's Convention, Hartford.

January 4-6. New York Fruit-Growers, Rochester.

January 17-21. New York State Agricultural Society, Albany.

January 25-26. Western New York Fruit-Growers, Rochester.

January 4-6. Eastern Ontario Dairymen, Perth.

January 18-20. Pennsylvania Horticultural Association, Harrisburg.

January 23-28. Meetings Pennsylvania Board of Agriculture, Live Stock Breeders' Association and Dairymen's Union, Harrisburg.

January 10-11. Peninsula Horticultural Society, Dover, Delaware.

January 25-26. West Virginia Horticultural Society, Charleston.

In the South

January 11-13. Virginia Horticultural Society, Roanoke.

January 26-27. Georgia Horticultural Society, Thomasville.

January 31-February 4. American Pomological Society, Tampa, Florida.

Corn-Belt Events

January 11-13. Ohio Horticultural Society Meeting and Apple Show, Columbus.

January 16-21. Ohio Poultry Show, Columbus.

January 30-February 11. Fourth National Corn Exposition, Columbus, Ohio. While corn will be king of the show, other grains will by no means be crowded out. Every grain-grower will be interested. The state corn show, The American Breeders' Association meeting (February 1, 2 and 3) and the state dairymen's convention (February 1-4) will be held in connection with the exposition.

January 12-13. Indiana Dairymen's Convention, Lafayette.

January 31-February 10. Illinois Horticultural Society, Champaign.

January 11-13. Wisconsin Cheese-Makers' Convention, Milwaukee.

January 13-14. Wisconsin Experiment Association, Madison.

January 30-February 1. Wisconsin Butter-Makers' Convention, La Crosse.

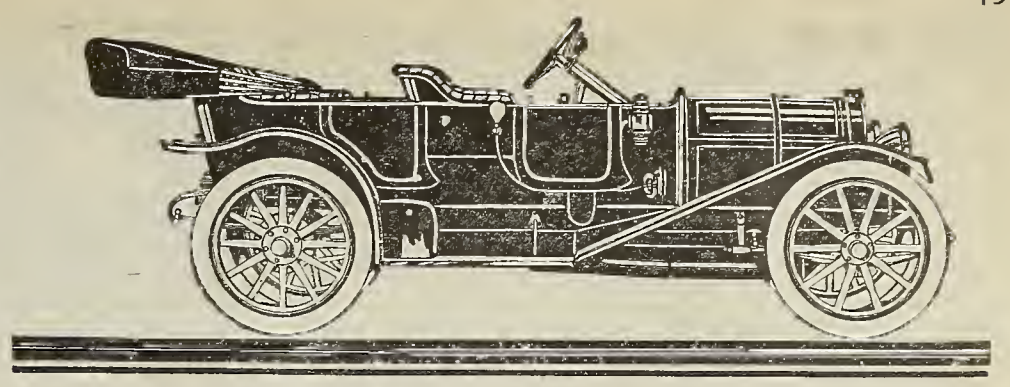
January 11-13. Missouri Horticultural Society, Columbia.

January 16-20. Nebraska Poultry Show, Lincoln. The State Dairymen's Association, the Horticultural Society and others will meet the same week.

Mountain States and Coast

January 31-February 4. Montana Poultry Association, Missoula.

January 4-7. National Convention Wool-Growers' Association, Portland, Oregon.



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Easy riding, an impossibility over rough country roads with most cars, is highly featured in the Abbott-Detroit because we have adopted the identical spring suspension in use by the most expensive foreign makes of cars.

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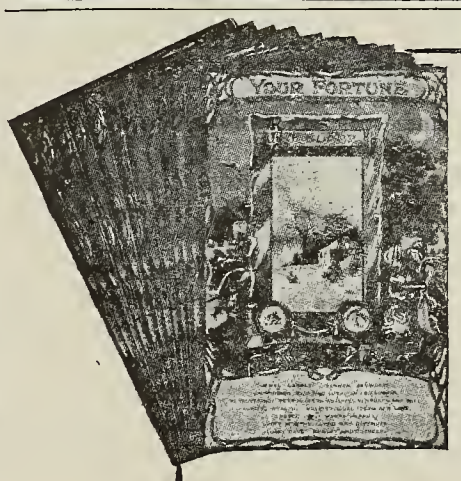

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FARM AND FIRESIDE

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ABOUT ADVERTISING

Farm and Fireside does not print advertisements generally known as "readers" in its editorial or news columns.
Mention Farm and Fireside when you write to our advertisers, and we guarantee you fair and square treatment.
Of course we do not undertake to adjust petty differences between suhscribers and honest advertisers, hut if any advertiser in this paper should defraud a suhscriher, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.
Farm and Fireside is published on the 10th and 25th of each month. Copy for advertisements should he received twenty-five days in advance of publication date. $2.00 per agate line for both editions; $1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2¼ inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.
Letters regarding advertising should he sent to the New York address.

Matches made in heaven ought to be the safety kind.

One way to get plenty of mail in your box is to get your name on the "sucker list."

The "roly-poly" doll and a good man are alike; you can't keep either of them down.

The reason some men seem to get along so easy is that they are traveling down grade.

The worst thing we've got against our best judgment is that it is usually so tardy in showing up.

Both farmer and team should be home and fed at dark, instead of hanging around town. There's nothing in that.

Some men, no matter where they may go, never live in a good neighborhood, because they themselves lower the general average so much.

The conservation of our national resources is a good policy, as we are all agreed, but the conservation of the commonly wasted resources of the farm is another policy of much greater personal concern to the individual farmer.

These long wintry nights are the times when the young folks are seeking some sort of entertainment, and the farmer who is providing clean home amusements and plenty of wholesome reading need not worry about the children floundering into the pitfalls of the city.

The late David Rankin, of Tarkio, Missouri, the largest farmer in the world, made good use of the manure-spreader, having in his possession a large number of these machines. He also practised a systematic crop rotation. Probably no man in America ever made more money in farming than he, and his example is certainly worthy of notice.

Backtothelandia

The discovery of America was an important event; but the newly discovered continent Backtothelandia is likely to put America in second place among geographical discoveries. You see Backtothelandia described in all the papers. It is best seen through the advertisements in the daily press and in the conversation of the people who are in charge of the booths at land shows and the like. The immigration agents of states and railways are also well versed in the wonderful character of the new continent Backtothelandia.

Backtothelandia is almost anywhere you please. Some say it is in the South, some in the West, some in the East and some right here. Probably the latter are the nearest right. Possibly there is truth in the claims of all. Far be it from us to cavil as to the mere matter of location. Being a continent, Backtothelandia must be easily found.

The great thing about Backtothelandia is that wherever it is, it is the place of all places for the farmer. He is sure to succeed whether he has ever had any experience or not. In Backtothelandia the hogs never have cholera, and the hens are quite free from both absent-mindedness and pip. The fruit-trees somehow make their owners wealthy whether said owners have ever seen a tree before landing on Backtothelandia's fertile shores or not. In Backtothelandia, the stenographer from the city sees her broad acres tilled by the automatic plow, while she swings in the hammock under the eucalyptus tree with the Yale halfback who owns the next farm, while he smokes genuine Havana cigars made from genuine Havana tobacco which springs spontaneously from Backtothelandia's soil. As they commune with each other and plan for a future of bliss, he glances occasionally at the self-acting manure-spreader which is spreading top-dressing over his fields like a thing of life. This fertilizer, like everything in Backtothelandi , is scented and tinted, and takes its place on the fertile fields with no work and no inconvenience. There is nothing dirty, nor hard, nor vexatious in Backtothelandia. There farming is done to music. If other music fails, the clink of golden coin as it falls into the automatic chute leading to the bank is never lacking—not in Backtothelandia.

There the farmer wears diamonds, and his wife goes forth in satins and silks. Their six-cylinder car ever pants at the gate. They are the envy of the banker and the merchant. When they go to town the city people stand about and admire them. Oh, the farmer's life is one grand, sweet song—in Backtothelandia.

*

Backtothelandia was discovered by an expedition of journalists, ad-writers, passenger agents and real-estate men. It is in all probability the terrestrial Paradise rediscovered.

Frequently it is asked why the old-fashioned cow-milking, fork-handling, hog-feeding, corn-husking, muddy-footed, crack-handed, back-aching potato-picking, onion-weeding, manure-hauling farmers don't all immigrate to Backtothelandia where all is sweetness and light.

And that brings us to the strange thing about this new continent. It cannot be found by the ordinary farmer who is a native of Nowonthelandia. He can't find it to save his life. Backtothelandia is to be found only by the city dwellers. And they seem to be able to reach it only by taking the Real Estate Special, and getting off at Surethinghurst-on-the-Sunday Supplement. There the stenographer and the Yale halfback live and love and break the speed laws and roll in wealth—for these things come to the farmer in Backtothelandia.

Natives of Nowonthelandia, however, will have to stay on the more prosaic plane where farming is work—and work the pay of which is not so scandalously big. Sad, but true!

* * *

Agriculture is rich in possibilities for physical culture.

Bad weather is no time to get up wood. Then is the time to reap the benefit of wood long stored away.

Many a farmer may not be killing two birds with one stone, but he is allowing one stone to ruin several blades of rich grass in various spots about the farm.

The best rural school of agriculture is a fine large family of farm boys and girls, presided over by intelligent parents who are thoroughly in love with their life and environment.

Blessings in Disguise

Sometimes a calamity is hard to tell from a blessing—at first sight. Three of the great calamities which our agriculture has suffered are almost sure to turn out blessings.

The first is the Mexican boll-weevil. It looked at one time as if the cotton crop were doomed. Banks were afraid to extend credit on a threatened crop. Some rich districts were losing population and suffering great distress. But, largely through the fine work of Doctor Knapp of the United States Department of Agriculture, confidence has succeeded to despair. It has been shown that by planting earlier cotton, planting it at the right time, planting it in the right way and by proper cultivation, good cotton can be grown in spite of the weevil. In other words, the weevil is forcing on the South an era of better farming, of crop rotation and of diversified agriculture. The agricultural resurrection of the South will date from the descent upon it of this calamity.

The second is the San Jose scale in orchards. This pest has forced an era of spraying, and spraying does good in many ways besides killing the scale. It kills a lot of things of which we did not know before we had to spray. On account of this and kindred calamities, we are entering upon an area of better fruit and more profitable fruit-growing.

The third is the drought which has threatened and still threatens the semi-arid West. From the struggle with this calamity will develop—has already developed in some degree—methods of drought-resisting farming for both East and West.

And weeds—why, if it had not been for weeds we should never have learned the value of tillage.

Out of the nettle danger we pluck the flower safety.

Aiding the Swindlers

The postal authorities recently raided the offices of Burr Brothers of New York, arrested its officers and employees, and seem to have put the concern out of business. The charge was using the mails for the purposes of fraud. The postal authorities state that the public has been fleeced out of a hundred millions of dollars in five years by seventy-eight get-rich-quick concerns.

"But," adds Postmaster-General Hitchcock, "their heydey is over."

Just how the postmaster-general can be sure of this does not appear. Burr Brothers and the other seventy-seven have done business by means of advertising. So long as the magazines and newspapers publishing their advertising are as widely read as now, swindling ought to be as good in the next five years as in the past.

The whole matter rests with the readers of magazines and papers. If people welcome swindlers into their homes, they may expect to be robbed. No man can keep his pockets perpetually buttoned against the man who sits beside him at meals and sleeps in the same room; nor he be quite sure of his bank account against the concern which sneaks into his mail-box through the advertising columns of magazines and newspapers.

One of the concerns, the stock of which was being sold by Burr Brothers, is the Buick Oil Company. The readers of most of the daily papers read about the raid, but were left in ignorance of its relation to this oil company. The reason? Look in the advertising columns and you will see. The huge advertising display in most of the daily papers seemed to crowd out the name of the company, the stock of which was advertised. It is thus that even the news columns are doctored to save the face of the publication that takes the miscellaneous advertisement.

*

We are coming into a new era in the publishing business. The whole matter of the relation of the reader to the advertiser must be reformed. Some readers there will always be who will read the papers that aid the swindlers, just as there always will be people who patronize the squeezed spindle of the wheel of fortune at the fair or the circus. But the intelligent reader is coming to demand that the newspaper stand between him and pickpockets, just as the intelligent attendant at fairs and circuses demands the same thing. And there are thousands of readers of daily papers as well as farm and family publications, who will look back over their files at the advertisements of the Burr Brothers' concerns and stop the paper. Among the concerns promoted by Burr Brothers are Carolina Consolidated, Coalinga Aladdin, Kern-Western, New York-Coalinga, Coalinga Crude Oil, People's Associated Oil, Rawhide Tarantula, Montezuma Mining and Smelting, Golden Fleece, Ellsmere Farm, California Eucalyptus Timber, Red Top Mining, Long Beach Mexico and Arizona, Nevada Goldfield, United Standard Lead and Zinc, Florence Consolidated, Round Mountain Central, Cobalt-Portage, British-American Copper, Arizona Copper Gold Mines, Searchlight Canina, Holcomb Automatic Engine and Cottonwood Copper, and they have sold stock in Happy Jack Copper, Yukon Basin Gold Dredging, Toledo, Wabash and St. Louis Railway, Chicago-New York Electric Air Line Railway, the Vitak Company, and others.

Any of these familiar to you? Don't all speak at once, please!

* * *

If a man can do one thing well he is a success.

The lover of trees never makes a hitching-post of one.

Praising the cook is a good way to improve the fare.

When Solomon said, "The borrower is slave to the lender," I do not think he had in mind the fellow who borrows his neighbor's tools and farm utensils, and then fails to return them until called for or takes them home all out of repair. In that case the situation is completely reversed, as many an accommodating farmer has learned to his great inconvenience and greater vexation.

The FARMERS' LOBBY.

By Judson C. Welliver

I AM going to open this letter with a confession. The confession is that I am about to tell all about something I don't know anything in particular about. In making this confession I am simply more candid than a lot of other people would be in similar circumstances, or than I might be under some other occasion. I am sure that I have some facts which the readers of The Farmers' Lobby will find interesting. But as to the interpretation, the explanation, the ultimate significance of these facts I may as well frankly say that I shall have to guess at it, and that I rather suspect the rest of you will, too.

The big, basic fact is that the American Packing Trust has got control of the meat business of the world. What I ought to do, I suppose, is to explain exactly what that signifies in its relation to the American producer and the American meat-consumer and, incidentally, what its effect will be on the cattle-raisers and the meat-eaters of the rest of the world. Frankly, then, I don't know. I have heard people say that they believed the Standard Oil Company was a good thing, because, after all, it was an American trust. Maybe they were right, though personally I never could see any great reason why an average American citizen, not a Standard Oil stockholder, should be satisfied to pay excessive prices for kerosene if only he was sure that the Englishman and the New Zealander, the Chinee and the Hottentot, were being squeezed even harder than he. Still, there are people so devoted to the idea of American commercial expansion that they think foreign commerce is a good thing even if in order to do it we have to sell things abroad cheaper than we sell at home. These people may be right, but the type-writer on which I am writing this letter cost an even one hundred dollars, and when I saw one exactly like it on sale in London for eighty dollars, I was just narrow and mean and personal and unpatriotic enough to be madder than hops.

An Empire of Beef and Pork

BUT about this control of the world's meat-supply by our Packers' Trust. The sequence of development in this connection has been right interesting. One day J. Ogden Armour announced in a casual sort of way that meat was going to be cheaper. So was live stock. Mr. Armour intimated that supply had caught up with demand; in fact, had gotten a lap or two ahead; and thereupon of necessity prices must go down.

There was great rejoicing forthwith among folks who buy meat from the trust, but who don't sell meat to the trust. Two or three days passed, and nobody noticed that his meat was getting very much cheaper; that is, nobody except the man who had live meat to sell. His meat was coming down all right; but the newspapers in New York, Boston and Kalamazoo and Ipswich and Tombstone and other towns, after interviewing the local butchers, reported that the price didn't seem to be coming down very fast so far as the consumer was concerned.

Next, Dr. Harvey W. Wiley climbed up on the breastworks that protect his position as the apostle of pure food and announced that, in fact, it was all a grand bunk; that meat wasn't going to be any cheaper so far as people were concerned who ate meat, though the packer might perhaps reduce the price which they were paying the farmer, as a means of skinning him out of a few million dollars.

This cheerless suggestion was followed, in its turn, by the announcement, in the European cable despatches, that American meat was selling cheaper in London than in this country. This was such an exaggerated and obviously impossible statement that for myself I should never have been so innocent as to pay any attention to it at all, but for the fact that I once spent a Saturday evening going to a big public market in London getting prices on meat which they said was American meat, and which looked good enough to be American meat. Afterward, I compared those prices with quotations on the same day in Washington, and you may read me out of the party—if you can find out which one I belong to—if the figures didn't actually convince me that the London prices were lower than those in Washington. If that be treason, make the most of it.

Right on top of Doctor Wiley's warning and this dispiriting comparison of prices came a series of remarkable documents, published by the Department of Commerce and Labor. These were long, circumstantial and detailed reports made by two or three special agents of the department, who declared that the American packers had secured control of the meat business of Argentina. They were not the emanations of any scatter-brained reporter for any sensational newspaper. They were the serious outgivings of officials who had made the most careful investigation on the ground, and here is the substance of what they reported:

Argentina is the second meat-producing country in the world. The United States is, of course, the first. For a number of years the great American packers whom we know collectively as the Meat Trust have been getting interested in Argentina. This much has been known for some time. The information of immediate and peculiar significance is that these special agents report that the American combination of packers is now in complete control, or at least in complete domination of the beef-killing, packing and marketing business of Argentina. They own the controlling interest in two of the biggest packing companies in the republic. In addition to this the special agents have the best of reasons to believe that the American packing concerns own a dominating interest and are, in fact, the managing influence in practically every packing and marketing company in Argentina except one and possibly two.

"Competitors" at Home, Comrades Abroad

THE one unquestionably independent concern is owned by English capitalists. Its independence constitutes no real menace to the control of the industry by the American trust because the total business controlled by the companies which can even be suspected of independence is so small as to be practically negligible.

The five great American packing concerns, Nelson Morris & Company, Swift & Company, Schwarzschild & Sulzberger, Cudahy and Armour, are all interested together in the Argentina development and exploitation. It seems that our own Department of Justice has had great difficulty adducing legal proof of a community of interests among these great firms; but the Department of Commerce and Labor, going away from home to get the news, apparently had not the slightest difficulty in convincing itself that the five big houses are operating in community of interest in far-away Argentina.

Not only is it stated unequivocally that their interest in Argentina is a common one, but American meat-producers will be particularly interested to know that the special agents find that the American packers are spending great sums of money to induce the Argentina stock-raisers to produce a better quality of cattle. Until very recent years the corn-fed beef of the United States was the best in the world. For that matter it is yet. But there is no reason for easy confidence that it always will be, for the Argentinians are developing methods of handling their stock, and are raising and feeding them corn, so successfully that there is no reason to doubt that before many years Argentina meat will compete on even terms with the American product in any market on earth.

The American farmer may perhaps be able to grow enthusiastic about the expansion of a great American industry which thus goes into another country and develops a great business with the view of making it compete with the business of meat-raising in this country. That is one of the points concerning which I have some misgivings. I suppose if I were a real patriot I would rejoice that any combination of American capital and industry can go way to South America and presently build itself into domination of the greatest industry of the Argentine Republic.

Forestalling Tariff Revision

WE are assured by the special agents who have made this investigation that the packers, in their Argentina exploitation plans, have no designs of shipping meat to the United States. At first blush this suggests that the American farmer and meat-grower is not going to be compelled to meet in his home market the competition of the cheaper Argentina product, produced under conditions of almost unlimited range on low-priced land. But let us see about that. The packers' combination already controls the American market. In the last two or three years the prices of meat at retail in this country have been so high that there has been a vast deal of talk about removing the tariff from meat, as a means to giving American consumers, especially in the great cities of our Atlantic seaboard, the benefit of competition from abroad. Now, the only competition that could possibly be effective in the American market is the competition of Argentina meat.

If the American packers, who already control American meat, have now secured control of Argentina meat, then it must be approximately as plain as the nose on your face that, even though our tariff on meat be removed, the packers will have nothing to fear by it, and the consumer will have nothing to gain. If our packers control the Argentina supply, we may fairly presume that they will calmly adjust their thumbs to the ends of their noses and smile blandly as they twinkle their fingers at us. They will simply refuse to ship in any of their Argentina meat into the United States to beat down the price of their American meat. They will have us at both ends, and, of course, we may reasonably expect, knowing how they have acted about those things in the past, that if there is any benefit for anybody in the reduction of the tariff, they will take it for themselves by reducing the price to the farmers.

The story goes that the American packers invaded Argentina in the first place, not so much because they wanted to control the business there, as because they were anxious, in this very way, to safeguard themselves against the possibility of the American meat tariff being removed. It looks to me as if they had a sure thing. But that is one of the things about which, again, I confess to some uncertainty. It may be unpatriotic not to be able to rejoice in one more splendid conquest by American capital, industry and enterprise in the markets of the world. Sounds good, doesn't it, that stuff about American conquests in the markets of the world? But suppose, as these special agents and Doctor Wiley and a good many other rather clever people suspect, that after the markets of the world have been conquered we discover that they have been conquered in order that the American farmer may get lower prices for his meat on the hook, and the American consumer may be compelled to pay higher prices for his meat on the block?

They Came, They Saw, They Grabbed

ACCORDING to these investigators of the Argentina situation, the American packers are spreading out there just as they did in this country. They own not only packing-houses, but warehouses, great selling agencies, stock-yards, lines of refrigerator cars and the most complete manufacturing facilities for utilizing, manufacturing and distributing all manner of by-products. I don't know whether they have also gone into the business of owning the cities in which they do business. In our American packing cities the packers have for the last decade or two gone in for owning the franchise corporations which control public utilities. I suppose that will be the next step in Argentina. Aside from all these features, we are told that the packers' combination is believed to be the financial backing of a new steamship line, called the Morris Line, which is putting on a service between Argentina ports and England. Whether the packers are actually establishing this line of vessels or not, it is stated that they have leased all the refrigerating space in the steamships.

Furthermore, agents of the American packers have been buying up extensive tracts of the best grazing and grain-growing land in the country, with the purpose of raising their own meat so far as possible, and making sure that if the Argentina government takes any effective steps to break the strength of their monopoly they will at least be able to furnish, from their own domain, meat enough to keep their plants in profitable operation.

Of course, really, it must be a fine thing that big, masterful, able captains of industry are able to go away and annex such a domain as this, in the name of American enterprise and progress. But, somehow, I can't help wondering what will become of the European market for American meat when our enterprising packers are ready to supply all the European market wants from the pampas of Argentina.

Just one other reflection in this connection. The Argentina meat-raisers are so much exercised over this American invasion that they insist that the government must really do something effective to conserve their interests. There are even intimations that the Argentina government thinks it has found a method of accomplishing what our own government has been utterly unable to do—namely, to prevent the Beef Trust from getting such control of the industry that it can impose its own terms on both the farmer and consumer.

POOR RELATIONS

By Adelaide Stedman

Author of "Miracle," "Intellectual Miss Clarendon," Etc.

Illustrated by Herman Pfeifer

Part III.

Outline of Preceding Chapters

MARION and Penelope Martin, who are left penniless by the death of their father, go to New York City to make their living, Marion hoping to be a newspaper woman and Penelope intending to start as a decorator. The girls are alone in the city except for their father's wealthy relatives, who do not wish to be troubled with poor relations. After a visit from their Aunt Clem and Cousin Penelope the girls learn that they need expect no help from them—that they must fight their fight alone. The rich Penelope is engaged to John Hastings, a newspaper editor to whom Marion has a letter of introduction. After many discouragements, Penelope is commissioned to refurnish the home of Mr. Shreve, who lives at New Rochelle.

That week the girls take dinner with their aunt. Penelope and her mother are beautifully gowned to make the gulf between them and their less prosperous relatives more evident. Their airs of condescension and criticism make the girls realize their position. They had hoped for a little word of comfort from their uncle, but it is not forthcoming. In fact, he is most unpleasant and almost brutal in his manner toward the girls, and in his conversation puts great stress on poor relations, which he terms "clinging encumbrances." Their cousin Fred is the only one who treats them with courtesy. He takes them to their hotel, to the great annoyance of his haughty mother. As he bids them good-night, he begs permission to call some time, for he seems to have taken a sudden fancy to Marion. The following Monday morning, the rich Penelope and her mother stop in to see John Hastings at his office. He asks Penelope to give her reason for not announcing their engagement. She makes some trifling excuse and at this point her mother hurries her away. No sooner has she gone than Marion is announced and presents her letter of introduction to Mr. Hastings. He has no idea that she is related to his fiancée, for the two girls decide to conceal this fact. Marion's extreme youth, and the fact that she is thrown on her own resources in a strange city, touch a sympathetic chord in John Hasting's big manly heart, and he appoints her a society reporter on his paper.

Chapter VIII.

ABOUT the time when Marion was in the midst of her interview with Mr. Hastings, a very happy Penelope was on her way to New Rochelle to start on Mr. Shreve's commission. When her train pulled in at the station a cart was there waiting to take her to Mr. Shreve's house. She was greeted by an amiable old lady, white-haired and gentle, who smiled at her from behind large gold-rimmed spectacles and quickly put her at her ease.

"My nephew, Mr. Shreve, you know, expected to be at home," she explained, "but he was forced to go to the city this morning. However, he expected to be back by half-past one." She took a large gold watch from the belt of her gray cashmere gown and peered at it anxiously. "Bless my heart! It's a quarter to two already," she exclaimed. "But if you don't mind waiting a few minutes, he's sure to be here presently."

"Certainly, I will wait," Penelope replied, smiling. She looked curiously around the dim old library to which she was led. All the atrocities of early Victorian furnishing held sway there, from the bouquet-sprayed carpet to the inevitable hair-cloth furniture, intermingled with a few gorgeously upholstered chairs with heavy fringed borders by way of variety. She quaked a little. Perhaps Mr. Shreve would have queer ideas of beauty.

At these conjectures, the soft-voiced old lady broke in: "My nephew feels that these surroundings are unpleasant since his wife's death. She had always been very fond of this style of furnishing. Both she and I were very fond of the old fashions." A quick little sigh interspersed her speech. "I know dear Bella (Mrs. Shreve, you know)," she went on, "was never so comfortable as when sitting on a hair-cloth chair with a good substantial foot-stool underneath her feet. She abhorred change. She inherited this house from her grandmother and it is quite unchanged to-day.

"Bella detested modern innovations. Mr. Shreve often begged her to brighten things up a little, but she always said, 'What was good enough for my grandmother and my mother is good enough for me.' And the furniture is as good as the day it was bought."

So the dear little old lady rattled on, not expecting any answers, while Penelope formed a mental picture of the deceased Mrs. Shreve which filled her heart with pity for the afflicted husband.

Suddenly Mrs. Bellamy rose, after noting the girl's sympathetic interest. "Miss Martin," she began timidly, "I should like your opinion on something. Of course, I want my nephew to have things just as he likes, but I must say I am very fond of some of these old things."

"Of course," Penelope assented cordially, "some of them are beautiful." Her eyes rested approvingly on a big brass fire-screen glowing gold in a corner.

Mrs. Bellamy's eyes grew bright with pleasure. "Come," she beckoned, leading the way into the enormous drawing-room, glittering with crystal pendant lights, marble-topped tables and the huge gilt bordered mirrors.

Finally she stopped in front of the ornate mantelshelf and pointed to a series of bisque figures standing in various airy positions, a long file of shepherds and shepherdesses, dancing girls and flower-sellers, modestly attired in faded blues, lavenders, pinks and delicate tans.

"Do you like them?" the old voice queried eagerly. The old lady looked at the girl anxiously and somehow the gentle-hearted Penelope felt her eyes grow moist with understanding pity of this clinging to old idols. "They are quaint, aren't they," she parried tactfully. "Perhaps they could be put in your room."

A pink flush touched Mrs. Bellamy's cheeks. "My dear," she exclaimed warmly, "I can hardly wait for you to arrange them for me."

The time was passing rapidly. "Mr. Shreve must have been detained," the girl suggested. "I ought to be back in the city by five o'clock. I wonder if I had better wait."

As if in answer to her question a telephone rang in the adjoining library. Mrs. Bellamy took up the receiver. "It is Mr. Shreve," she announced. "He was unavoidably detained, but is at the station now and will be here in a few minutes."

It wasn't long before Mr. Shreve arrived, very apologetic and very cordial. He was a tall man of about forty, with a pleasant, kindly face, lit by absent-minded blue eyes which held in them a perpetual twinkle.

"Miss Martin," he greeted Penelope, "can you pardon my tardiness? You will understand that it was unavoidable." He bowed.

"I quite realize the situation," the girl responded. "However, the time has been well spent, for Mrs. Bellamy has already given me a preliminary glimpse of the house. Have you any special idea as to how you want the rooms done?" Penelope asked the question innocently.

He nodded vaguely, his eyes resting almost unconsciously on her lovely face.

"Pardon me for being so businesslike, but really my time is so short," the girl went on, trying not to be self-conscious.

"Eh—I beg pardon," the gentleman came to himself with a start.

"I was just asking," Penelope repeated, "if you had any special ideas as to furnishing."

"George, no!" Mr. Shreve responded emphatically. "I—I thought I could leave everything to your discretion and good judgment." He looked positively alarmed at the suggestion.

"Thank you, but what is the key-note to be; elegance, originality or comfort?"

"Comfort, George, that's the word," the man's face relaxed again. "I—well—I haven't found the present furnishings exactly satisfactory in that respect."

They were both seated on slippery hair-cloth chairs, and Penelope could appreciate the truth of his remark.

"Perhaps," he began again, "you could make suggestions for re-furnishing this library. That would give me a good idea of your style."

"Why, certainly," Penelope's eyes glowed as she again noted the room's buff and black color-scheme, dirty-looking against the oak paneling.

"To begin with, I would furnish this room in royal blue, the bright soft shade. The floor would be inlaid and polished, then covered with rich-toned Persian rugs and, yes, there would be a big black-bear skin before the fireplace.

"The walls would have a plain, restful paper, blue, of course, and the windows inside of the white curtains would have drapings of the same color."

Again she paused, smiling as she became absorbed in her ideas, "Then," she went on, "in the center of the room, not *exactly* in the middle, you understand, I'd have a heavy oak table, not a new one, but old and polished like the woodwork. On it would be an oriental lamp, and books and papers which are being used—used all the time.

"Then there would be a brass fire-set on the hearth, made to match that exquisite old screen you have, flanked on either side by deep velvet chairs, the kind one sinks into with a sigh." The girl's eyes were fixed as on a vision, and her face was radiant as she continued, "We would banish these high awkward bookcases and put in their places low, broad ones with solid, flat tops fit to hold busts of authors, a squat flower-bowl or two, and so on.

"Scattered about the room would be a few carved oak chairs upholstered in velvet or leather, a tea-table—and do you smoke? Yes. Well then, several brass cigar-stands with little open-mouthed dragons on them to swallow up the ashes. A few plants would give life to the corners and on the walls—" She hesitated, then questioned softly, "Who are your favorite authors?"

[CONTINUED ON PAGE 27]

"'Scattered about the room would be a few carved oak chairs, a tea-table—and do you smoke?'"

Thine Eyes So Blue and Tender

WALTZ Tempo di Valse Lente

G. EMERSON

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D.C. al Fine.

Nina Ivanek

A CHRISTMAS CINDERELLA

By Izola Forrester

Illustrated by G. A. Beneker

DO think she might have chosen some other time besides Christmas week, when she knows how busy we all are." Belle frowned thoughtfully out at the snow-laden trees in the garden, and tapped her hand with the letter she had just read aloud to the family. The family certainly seemed noncommittal over its contents. Harold was bolting his breakfast in haste, a morning paper lying beside him, and a stack of unopened letters. Rosalie was smiling over something in one of her letters, and even Mrs. Thurston herself appeared preoccupied. Only old Mrs. Olney listened from her easy chair at the south window that the winter sunshine made cheery and bright.

"Is that Cousin Abby Somers' daughter, Belle?" she asked in her sweet, low tone.

"Yes, it is," retorted Belle, almost ungraciously. "And why on earth she should choose us out of all her relatives to afflict with a Christmas visit, grandma, I don't know. But she's coming."

Mrs. Thurston glanced up hastily from her own mail, at the tone of hopeless despair.

"Who's coming, dear?"

"Here's a letter from Lavinia, and she's coming for Christmas week." Belle's tone was absolutely tragic over the simple statement.

"Well, dear, I expected her. Didn't I tell you I had invited her? Poor little girl, life hasn't run in golden pathways for her since she went out West to teach a lot of girls to—how to—how to—" Mrs. Thurston's harmonious voice always ambled comfortably away into the ambiguities when she started to talk. She glanced at the clock on the mantel and rose. "I have an appointment at nine-thirty, dears. What was it Lavinia went out West to teach at that girls' college, Belle?"

"Domestic science," there was rich scorn in Belle's tone. "Domestic science, mama! Cooking, in other words. I suppose it's all she could teach."

"Don't cultivate sarcasm, Belle," said Mrs. Thurston happily. "We'll have a house full of company, anyway, and one more won't matter, and it will do the poor child a world of good. I'm sure it's little enough to give her a glimpse of real—real—real—"

"Society, mater?" Harold suggested, with a comprehensive smile. "Do you call anything that has its being in Trenton, society?"

"Trenton was setting its own pace in American society back in the days when Major André ran over from Philadelphia to lead the minuet with our fairest débutante, and I trust we have not retrograded. Which makes me think, Belle, have the cotillion favors arrived from New York?"

"They just came, mama," Rosalie put in absently. "I told Barker to have them put in the sitting-room up-stairs so we could look them over. And your gown came, too, and Belle's."

"What are you going to wear, Mary?" asked Mrs. Olney placidly.

"Why, er—ashes of violet, mother," Mrs. Thurston responded pleasantly. "Or is it more on a catawba shade, Belle?"

"Sort of purplish, I presume?" Grandmother's tone was full of cheerful interest.

"Yes, dear, on that order."

"I used to have a sort of purplish silk alpaca when I was a girl, that was real neat. It was all piped with a sort of lemon silk and had undersleeves of hand-embroidered lawn and fringe on the overskirt. It was a real serviceable dress."

Nobody was listening, so the old lady's voice trailed away by itself into the shadows of reminiscence, and she was silent.

"Harold, dear, you'll have to meet Lavinia this afternoon." Mrs. Thurston paused at the door to speak to her eldest. "Don't take the car, because the girls and I will need it. We're going over to the capitol at two."

"Meeting of the Colonial Sisters?"

"Colonial Dames, dear. Yes. A sort of dress rehearsal, and to make sure the decorations are right and everything attended to. You know I am the Chairman of the Committee on Arrangements. Aren't you proud of your old mother, boy?"

She leaned over his head, with a loving touch on his thick brown curls, and laughed. Nobody knew better than Mrs. Thurston that for the mother of three children over eighteen, she was a wonderfully handsome and youthful-looking woman.

Harold rose and kissed her cheek with a laugh of pride.

"Mother, you're a winner. You grow younger every day. You're positively the loveliest girl I know."

"Ssh-sh!" She laid her finger on his lips, flushing with pleasure at the boyish compliment. "Now listen and be a good boy. I shall have to rely on you somewhat about Lavinia. The girls frankly do not want her at this time. Of course, it is a little awkward, for she probably won't have anything fit to wear, but that won't matter. She won't expect to go out much. I thought I'd let her go up in the visitors' gallery and look on at the ball. The costumes would interest her, undoubtedly, and be instructive, too. And she might get a chance to look at the governor."

"You may look, but you mustn't touch?" quoted Harold teasingly. "Mother, I am sure such a round of pleasure would be nerve-racking to Lavinia. I'd leave her here with grandmother if I were you. They just about suit each other."

Mrs. Olney's eyes twinkled behind their gold-rimmed glasses.

"And I'd love to have her," she said warmly. "I remember her when she lived here ten years ago with Cousin Abby, before they moved West, and she was a right smart little girl and real modest in her ways, and her manners were irreproachable, Mary."

"And her hair was red as copper," added Harold wickedly. "You wouldn't have thought her manners irreproachable, grandma, if you could have seen her chase us boys when we called her 'Firetop.'"

Mrs. Thurston glanced thoughtfully out of the window at the snow-covered lawn. The snow was falling heavily, softly, without any wind-blown antics.

"I hope this storm will let up before night. You had better take the small cutter, dear, to go to the station. And do be nice to her, for mother's sake."

It was after four when Harold came back from the station, and he was alone. None of the family was present except Mrs. Olney, who stepped to the entrance hall to greet him, her sweet old face smiling with a welcome for the guest. But there was no guest.

"The wires are down and the trains are all blocked between here and the West on account of the storm," Harold told her, as he slipped out of his fur coat and shook himself like a big dog. "Whew, but I had a time beating up the hill from the depot. It's setting in for an all-night blizzard, too."

"But where do you suppose Lavinia is?" asked Mrs. Olney perplexedly.

"She's probably very comfortable in a cozy parlor car somewhere along the railroad line, waiting for a snow-plow to break the way open," laughed Harold. "I've left word at the depot for them to telephone us as soon as they get news that the trains are moving again. It's a mighty poor night for the colonial ball."

"Maybe your mother and the girls will stay at home, it's snowing so?" put in Mrs. Olney reflectively.

"Indeed, they won't, grandma," Harold told her. "They'll go to that ball if they have to use snow-shoes and skees to get there."

"Why, 'tain't anything but a Colonial Dame celebration. Land, if your great-great-grandfather Peabody had a known his great-granddaughter Mary would have made so much fuss over his joining the Continental Army, he'd have turned right over in his peaceful grave long ago."

"Is little Cousin Lavinia descended straight from the Peabodys, too?" Harold's tone was casual, as he leaned forward and gave the great log on the hall fire a poke.

"Well, she's more direct than you or your mother's folks, 'cause she comes right down through the Somers line. Her mother was a Peabody, but her father's folks are all Somerses. Some are Peabodys and some are Somerses, but Lavinia always did favor the Somerses more'n the Peabodys, and there was a Somers on Washington's staff, and the Peabodys—"

The outer storm-doors opened, and Mrs. Thurston and the two girls came in hurriedly.

"Don't detain me one minute," Mrs. Thurston said. "The wires are down and the trains are blocked, and half the people won't be able to get here at all, I don't believe."

"Never mind, mother darling," laughed Harold. "If there's nobody at all present except yourself and the governor, the ball would be a howling success."

Meanwhile, the Chicago express was stalled in the mountains below Harrisburg. It sounds like a simple statement, but the prospect of spending Christmas Eve on a train snowbound had thrown everybody aboard into a state of nervous excitement and worry.

But there were two who did not appear to be troubled at the delay. Seated comfortably in the parlor car, Lavinia listened with happy, restful eyes, to the man in the next chair.

"You don't know how good it is to see you again," he was saying, his eyes watching the earnest girlish face and downcast lashes and soft up-curling masses of chestnut hair. "Didn't you used to have—"

"Yes, I did." She caught the words from him laughingly. "Red hair. Don't you remember one day, when all the boys were teasing me, and you came along and saved me. And you told me you really liked red hair."

"I did," he rejoined, and added fervently, "I do yet."

She flushed a little and tried to look out of the snow-incrusted window.

"We'll never reach Trenton to-night."

"I haven't any idea we will," he answered happily. "Merry Christmas, Lavinia."

"I wish you the same, sir, and many, many of them," Lavinia teased back, her dark eyes full of merriment. "Tell me, truly, though, you're not really on the governor's staff, are you?"

"I'm afraid I am. Why?"

"I don't know." All at once a little shadow sobered the dimples, and she hesitated, then went on frankly. "You know I'm so glad to meet you again. You're the very first of the old friends to speak to me and remember me. I'm afraid Aunt Mary and the girls have floated so high up in the social scale that I shall need an airship to even come within hailing distance of them."

Warner laughed at the mental picture.

"Oh, I don't think you'll lose your way. You always did nobly hold your own. Were you going to the colonial ball to-night at the capitol?"

Lavinia shook her head.

"Never heard a word about it, but I hardly think Cinderella will go to any capitol balls."

"Your aunt is the Chairman of the Committee on Arrangements and President of the Trenton Chapter of the Colonials."

"Were you going?" asked Lavinia.

Warner glanced at her quickly and smiled, as he nodded.

"Oh, yes, I was going, but it won't matter."

"Maybe the governor will miss you?"

"Maybe."

Lavinia sighed.

"I'm nearly starved."

"There's no dining-car on until we get to Philadelphia. How about a buffet luncheon right here? Jellied chicken and truffles and that sort of thing?"

It was toward the finish of the impromptu meal that a warning joggle came from the air-brakes, and the passing porter told them the snow-plow and extra engine had arrived, and they would break through to Trenton by eight or nine surely.

"Who cares?" laughed Warner.

"Not I. What dear little coffee-cups, aren't they, with the whipped cream piled on top like frosted lace? Where have you been the last ten years?"

"I've been supererogating," said Warner gravely. "Do you know what that means?"

"Going around and around and around?"

"Something of the sort. I've been very lonesome."

Something in his tone and look made her change the subject, but he went on. "You were fifteen then, weren't you?"

[CONCLUDED ON PAGE 24]

"'Will you tread one measure with me, my lady?' he whispered. 'Merry Christmas, dear!'"

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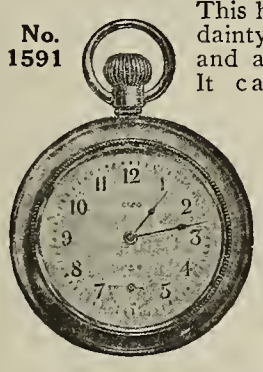

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The New Year

By L. D. Stearns

THE slate of life is all fresh and clean for another try, my friend.

Do you remember how, one day long ago, you bent with flushed cheek and drawn brow over the knotty problem that, somehow, would not come right, and your slate was all covered with such a confusion of figures that you scarcely knew the beginning from the end, and your eyes smarted with *almost* tears of vexation and disappointment? Then the teacher paused by your side and with kindly word reached down and drew the sponge across the slate, leaving it smooth and clean. "Now try again," you heard, "and avoid the error that you made before."

So now, at the beginning of this New Year, from the slowly fading trail of the past, the echo comes to us to-day, "Now try again, and avoid the error that you made before."

You and I, my friend, though we may not acknowledge it—though our nearest and dearest may not know it—realize to the full the errors that have gone before. We, alone, know the pet enemy that rises before us, lulling us with false sophistries and beguiling words, keeping us from the height of achievement or goodness or worth, that life has lifted before us as the standard to which it is ours to attain.

Friend, let's be humble; let's be honest; let's be *brave!*

Now, with the path gleaming straight and unblemished ahead, let's take stock of our *pros* and *cons,* accurately and steadily. Let's not be afraid to call black, black. Let's not whitewash. Clear-eyed, strong-hearted, true-souled, let us look at the year that has gone; then, putting it aside, start down the clear path, open to-day, with will and resolution not to make the same mistake again. God knows. Yet it helps to go on our knees and tell Him all about it.

I was once talking with a specialist on nervous diseases and in course of his conversation I noticed he used the expression, *"a perfect wellness of mind."*

As the New Year stretches away before us, let us reach out toward a *perfect wellness* of soul and life, looking squarely in the face those tendencies and temptations which rise before us, squaring our shoulders to the task, reaching toward the good and the true, crying, "I will reach the highest goal, or, at least, go toward it, that life has set before me, in this, the year of Nineteen Hundred and Eleven."

In Time of Trouble

By Orin Edson Crooker

THERE are times when it seems as though the burden we bear is more than we can stand. We feel as though we have reached the limits of our endurance; that it would be impossible to add another ounce to the great weight of responsibility we are carrying, and that we cannot stagger along for even another day under the heavy yoke that circumstances have placed upon us.

It may be that business reverses or misfortunes have overtaken us and that each day we are haunted by the fear of further trouble in store for us. Perhaps ill health has come upon us and our days are marked by a physical weakness that makes each step an exertion. Possibly sorrow has drawn its pall over our hearts and cast its gloom upon our life. Any of a thousand causes may have operated to increase the burden that is ours and make our own "cross" more difficult to bear.

It is in times like these that we should find comfort in the thought that while God's ways are past finding out there is no limit to His power to strengthen, to heal and to comfort. We should not despair. Let us draw near unto Him in full confidence that no matter what the burden may be or how heavily it may bear down upon us, "The bruised reed He will not break." Rather will He "strengthen and sustain."

The "bruised" or "broken" reed was a symbol in olden times of extreme weakness. And indeed the simile is well chosen, for nothing seems more devoid of strength than a broken reed swaying and trembling in the wind. There are many times when we feel that our strength is quite as limited and that we must look to God for the power to accomplish the tasks of the day. We should go to God with all our troubles. No matter how trivial they may seem, He always lends a willing ear. A woman of many responsibilities and a family of growing children once said that when she felt she had come to the limit of her strength she would cry out, "You *must* rest me, God. You simply *must.*"

It is in this spirit that we should go to God. When our own strength is gone, let us rely upon His. When we feel that we cannot carry the burden further, let us ask Him to share its weight. When it seems as though we could not get through the day, let us remember that "the bruised reed He will not break." The burden is either lightened or we are given strength to carry it.

The Test of Sacrifice

IAN MCLAREN tells of meeting a little girl, not yet ten years of age, who was fairly staggering under the weight of a brawny boy of four or five years of age whom she was carrying in her arms. The doctor stopped her and inquired with much solicitude, "Is not the little laddie too heavy for the wee lassie?" Two big blue eyes looked up wonderingly into his and then the answer came, "He's not heavy, sir. He's my brother."

How easy it is for us to do little services and acts of kindness when one feels that there is a common bond of relationship between us and the recipient of our favors. And how readily do we make the greater sacrifices of life if only it is "all in the family." Indeed, one hears of families that are referred to as "closed corporations" for no other reason than that they live so unto themselves and take so little thought and concern of those whose lives are lived outside their own charmed circle of relationship.

It is a question, however, whether the sacrifices we make for those near akin to us will rank, in the sight of God, with those that are made for those who have no claim whatever upon us. The real test of any sacrifice we may make lies not in how much pleasure it gives us in making it, but how much pain. It is usually a pleasure to renounce things in order to bring happiness to some one we love. We find a satisfaction in so doing because our interest is in a measure a selfish one. Of course, such sacrifices may be carried to an extreme, as, for instance, a father or a mother slaving their life away in order that their child may go to college. Such sacrifices are genuine and take high rank in heaven simply for the reason that they are extreme and are done only at the cost of pain and heartache.

"Do not give as it *pleases* you," said a man pleading with an audience for subscriptions to a worthy cause, "but give until it *hurts* you." This is the test of all true sacrifice. If it *hurts,* it is genuine.

The Dissatisfaction That Saves

THERE are two kinds of dissatisfaction; one that harms and one that saves. The former is naught but rank pessimism, the accomplished art of the professional fault-finder. To him nothing is as it ought to be. He grumbles about everything. He is never satisfied with things as he finds them. "Give him the necessities of life and he wants the conveniences; give him the conveniences and he craves the luxuries; grant him the luxuries and he sighs for the elegances; let him have the elegances and he yearns for the follies; give him all together and he complains that he has been cheated both in the price and the qualities of the articles in question." This kind of dissatisfaction is the kind that kills. It gnaws at the very heart; it saps the very life.

There is, however, a dissatisfaction that saves, for dissatisfaction may be a power for good when it stirs one to greater efforts and consequently greater achievements.

The man who is not satisfied with what he has done, who feels that he ought to have and could have done better, is a victim of the dissatisfaction that saves. A famous artist was once asked which of his pictures he considered represented his best work. Without a moment's hesitation he answered, "My next." And the poet Browning tells us of one known as "the faultless painter," who, at the height of his fame, pronounced himself a failure because he had ceased to feel any ambition to improve in his art.

This, then, is the dissatisfaction that saves, for it leads to growth, improvement, advancement, betterment all along the line. It is not content to stop short of the goal. No half-way results will satisfy. It presses on to victory.

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Looking Backward and Ahead

By Eugene Wood, Author of "Back Home," Etc.

Illustrated By Fred E. Lewis

"Take your handkerchief, Omar. Don't snuffle so"

On a long ride it is interesting when we reach a high point in the road to look back and see how we came. It gives a notion of the lay of the land, a better notion than we could get when we were passing right close to it.

Having reached the highest point yet in the history of the human race, it is interesting to look back over the long road—a long road, indeed, since first we handed ourselves down from the tree-limbs, and will be longer, for I believe we have only just begun to be humans—and get a notion of the lay of the land.

There are lots of things of historic interest in the landscape back of us, but we'll have to skip all them and observe only that, in a manner of speaking, we seem to be on a kind of a third level. Away back yonder in the low ground we humans lived and died and left no mark behind us that anybody could notice. Our bones soon crumbled, and if a piece of skull got under the drip of limestone and was somehow preserved, why, that was wonderful. So soon were we forgotten when we were gone that if one of our flint arrowheads that we took such pains to chip, were found by our descendants two hundred years ago, it was supposed to be a "thunderbolt," something that the lightning shot at the earth, or a fairy dart.

We caught what fish and what game we could, and our women-folks gathered what seeds and berries grew wild. We starved one month till you could count every rib, and the next month we stuffed till we could hardly see over our cheeks, we got so fat. When a neighborhood kind o' played out, we picked up and moved, and in a year's time what had been a lively settlement with the men sitting around talking politics, and the women doing the work, and the young ones squalling and fighting, was all wild woods again. Nature was the real boss of the situation, a stingy, cruel, old dame that had it in for us, and we sneaked around and got our living when she wasn't looking. She had it in for us, and we were obliged to do all sorts of things to get on the good side of the Mysterious Powers that made the fish run in close to shore, and the game plenty, that let the seeds and berries grow. If you are going to have trouble anyhow, you might as well have it over and done with, so on the second level in George Washington's time, folks used to get a nice congenial crowd together, and all go and have the smallpox in a bunch. On something of this same principle, the folks on the first level used to try to satisfy these cruel Mysterious Powers by killing their first-born son. Along about Easter-time, when things started to grow, and the fish and game to run, some of the elders would dress up and mask and go around and murder the first-born baby in the house where one had been born and splash the blood on the door-posts. And, later, the bright idea occurred to kill a lamb and splatter its blood about, so that the Destroying Angels, these elders got up kind o' Mumbo-Jumbo fashion, would pass over that house. Even as late as the time of the Prophet Joel people weren't right certain in their minds that it was right to try to fool the Mysterious Powers in this way. But the lamb's blood seemed to work every bit as well as the baby's blood as far as securing good luck for the ensuing year was concerned.

But for this and other plans to fool old Dame Nature we should never have risen to the next higher level. There we did not trust to luck that there would be plenty of game and seeds and berries; we tamed the meat-supply and we planted the seeds. Besides having our women do the work while we sat around and talked politics, and went out once in a while and did a little robbing and murdering, which we called war, just to give us an appetite for our meals and something to talk about during the long winter evenings, we had slaves. These were contemptible, cowardly cusses that put up an awful holler when we started in to kill them. They didn't want to die. They had sooner work than die. They carried on so about it that we took pity on them and brought them home with us on the understanding that they were to do all the heavy lifting and all the hard chores. Ever since then anybody that will do that kind of hard work has been looked upon as a poor-spirited thing, as bad as a woman, not much account in the first place, or he wouldn't have let himself be beaten in battle and a kind of a slink or he wouldn't be afraid to die; no proper pride or self-respect, or he would sooner die than work.

And at that they weren't sure we'd let them live. If they got sassy to us or we wanted to amuse the children or it was kind of hard times, we'd just as soon kill

"First we handed ourselves down from the tree-limbs"

'em as not. Little rather, in fact. So, if you and I were slaves, you'd try to excel me in raising crops or cattle. You'd try to see how well worth keeping you were, so that if it came to a pinch, I'd be the one to go to the chopping-block, not you. You set oxen to work, and horses, and even waterfalls, so as to turn out as large a product as possible and save your neck.

And so on that second level we throve quite well, humoring Nature all the time, and trying to get around her in various ways. But we never really tried to beat her at her own game. If there were mountains, we went around them or climbed over them. If we wanted to sail to the eastward, and the wind came from the eastward, why, we stayed at home till the wind changed.

And there we stuck, and there we would have stuck if it hadn't been that a boy one day watched the lid of a tea-kettle flop and got interested in it. For ages and ages the pot had boiled on the fire, and people had seen the vapor from it flowing into the air, as it were, the hair of Samson wherein all his strength lay, but it was only the Philistines of this age, the men of this third level to which we have climbed the long road of progress from the brute, that put Samson into the prison-house and set him to grinding there, turning the wheels for us. All the chores and heavy lifting that we formerly put upon the women, and upon the slaves, and upon the horses and oxen, and upon the waterfalls we now put on the Samson of steam.

And then was fulfilled that prophecy which was spoken by the serpent in Eden that if our first parents ate of the fruit of the Tree of Knowledge they should become as gods. We don't go around the mountain now; we go through it, and if it gives us any of its impudence, we'll take it away entirely and dump it in the sea. If we want to sail to the eastward, and the wind is from the eastward, why, let it stick there, and be blowed to it. We go eastward just the same and get there on schedule time, which we never did when we were only humoring Nature and not over-riding her as gods have a way of doing. When this age is over and done with, they won't go poking around in the dirt to find little pieces of flaked flint to remember us by. They won't have to stare at ruined temples and palaces and try to puzzle out inscriptions that we cut there. We shall have left indelible marks upon the very structure of the world itself. They'll know us by Panama—yea, I say unto you, by other achievements to which Panama will look like the county ditch. It might have been all right for poor, down-in-the-mouth Omar Khayyam to whimper out:

When you and I behind the Veil are past,
Oh, but the long, long while the World shall last,
Which of our Coming and Departure heeds
As the Sea's self should heed the pebble-cast.

(Take your handkerchief, Omar. Don't snuffle so.) But we aren't of that mind. We are not looking to make a big splash by throwing a stone into the sea's self; we want to make a lot of money out of the sloppy thing.

Never till now was the human race right sure that it was going to stay here. On the lowest level we looked for a dispossess any minute, what with plague, pestilence and famine, battle, murder and sudden death. We worried all the time for fear we shouldn't say the right words in just the right tone of voice to suit the Mysterious Powers that controlled luck. We might pick up a pin the wrong end to or spill the salt or break a looking-glass, and the Mysterious Powers would get their back up, and it would be good-by John with us. We'd go; the earth would stay, though.

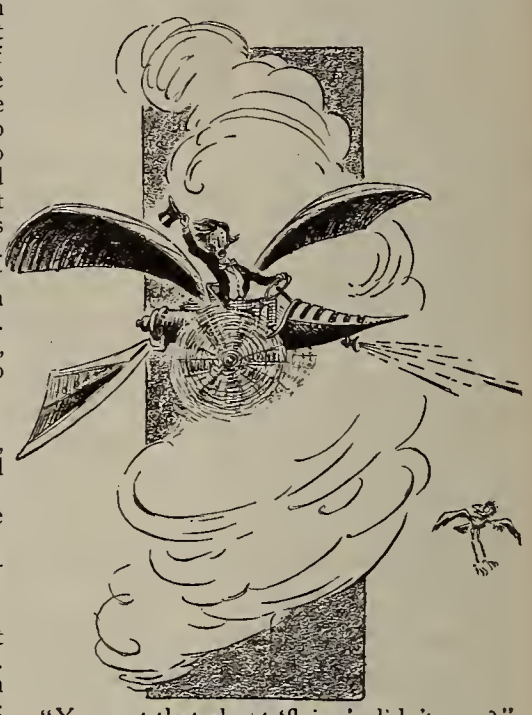
And even on the second level, they just kind o' lived along without a sense of permanency. Even those mighty structures they put up were like a boy whistling in the graveyard at night. It was all bluff and bravado. They were just "throwing a chest" and trying to live up to it. For, while they were less fearful of their lives they were still of the opinion that the world would take fire and burn up when they least expected it, and so they tried to be careful where they threw their matches. But it's different with us. We never give the Crack of Doom a second thought. Perhaps if we did— But we'll not go into that.

We don't try to propitiate Nature nowadays by offering our first-born sons. We don't try to humor her as we did on the second level. On this third level, where we are now, we change Nature to suit ourselves. If corn doesn't have as many rows of grains on the cob as we think it ought to have, why, we go and make a new kind of corn. If we find that the diamond isn't hard enough abrasive for us, besides being too scarce, we go and make an abrasive that is harder and cheaper, carborundum. We no longer offer sacrifices to Niagara or stare at it in wonder; we say: "Here! I've got a job for you." And Niagara touches its cap and says, "Yes, sir."

It's a different age from all that have preceded it, teetotally different. The first age was that of Luck and Violence; the second age was that of Art and Craft; this age is that of Science and Industry. When Science is applied to Industry it means the application of the Machine Process.

By that I don't mean that everything done scientifically has got to have a whole lot of cogs and pulleys and eccentrics and such-like rig-a-ma-jigs. Let me give you a little quotation from Prof. Thorstein Veblen that I hope will be as illuminative to you as it has been to me. "Wherever manual dexterity, the rule of thumb and the fortuitous conjunctures of the seasons" (Does that strike you as anyways descriptive of the Art of Agriculture?) "have been supplanted by a reasoned procedure on the basis of a systematic knowledge of the forces employed" (Get that?) "there the Machine Process is to be found, even in the absence of intricate mechanical contrivances."

That's a good thing to learn by heart. That's something you can "chaw on" when you're driving to town with a load of produce, the result of a certain number of your hours of labor which you will



"You got that about 'flying', didn't you?"

exchange on an even-Stephen basis for the result of a like number of hours of other people's labor. (In a pig's wrist.)

Now the people living in an age like this are not all of this age. Some people look like us and talk like us, but they're still away back yonder in their minds and in the way they get their living. (Which comes to the same thing if you'll look into it.) As Mayor Golden Rule Jones of Toledo used to say: "There are people living in America that haven't left the Old Country yet." Some still believe in Luck, and try to propitiate Mysterious Powers by doing things in the right time of the moon. They believe in Violence, for if a man doesn't do the way they want him to do, they say: "Put him in jail, and, by golly, MAKE him do it!" They can't see that all they can do is to put the man in jail; they can't MAKE him do what he won't do. These pass away and leave no mark upon the world. And there are those who live by Art or Craft. They humor Nature, and get along the best they can with her. They drive the pig to Dublin by making the obstinate baste believe he's going to Cork. These pass away, and while they do leave some memorials behind them, they do not make the world over. As for the men of this age—

Now Agriculture and those who practise it are, as a general thing, in the first two ages. Those whom we call "hill-billies" are still in the age of Luck and Violence; the up-and-coming farmers are still in the age when Agriculture is an Art, and is not yet a Science, when you can prophesy out of such-and-such a combination what you are going to get, of what sort and how much. Manual dexterity, the rule of thumb and the fortuitous conjunctures of the seasons have not yet been supplanted by a reasoned procedure on the basis of a systematic knowledge of the forces employed.

Can they be in Agriculture?

They've got to be.

Well, but *can* they be?

I just told you they had to be. Look here. Just take one point. I suppose it

[concluded on page 24]

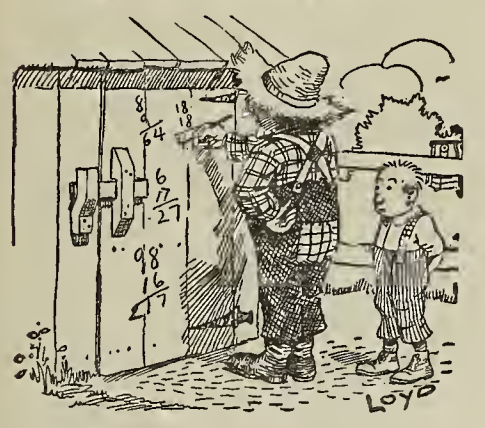
"What had been a lively settlement"

"It was supposed to be a 'thunderbolt'"

Our Puzzle School

Conducted by Sam Loyd

The Size of His Farm



Farmer Jones was complaining to his son Tommy that he agreed to pay $100 and a fixed number of eggs as the yearly rental for his farm. That, he explained, would amount to $8 per acre when eggs were worth 30 cents per dozen; but as eggs are now selling for 40 cents per dozen, his rent amounts to $10 per acre, which he thinks is too much.

Can you tell how many acres there are in the Jones farm?

Concealed Geography

Once more we resume our travels and challenge the puzzle experts to discover the names and places hidden in the following sentences:

174. Agatha's tooth aches; dismal Agatha.

175. We have borne war; kings can do no more.

176. After this refusal, a man called Tinder popped the question.

177. She called it a cabal, because she is a ninny.

178. I have lost my opal, my rather uncommon opal.

179. Arise! ring a-pat a merry peal.

180. Queen Elizabeth said awful things.

181. Adoniram is so long hindering Jacob.

182. March in a line. (Country.)

183. I said to her, O mercy! what's the matter?

184. Eliza then said to me, I have sprained my ankle.

185. I would rather ride under an elephant than over a rat.

186. I gave my apple to John, he gave his to William.

187. I have often seen a woman ride on a bicycle, but never on an icicle.

188. George Bergen evaded the enemy.

189. Which name do you prefer, Loring or Hamilton?

190. Shall you be at Holyoke this summer?

191. Neither woman nor man dyed their hair in the middle ages. (Province.)

192. He smote himself upon his chest, erring and weak King Charles.

193. Such a color! a downright brick-color. (River.)

194. She brought a bottle of myrrh in each hand. Myrrh! Oh, never touch that. (Rivers.)

The Sandwich-Men

An enterprising merchant paraded a group of sandwich-men in front of his establishment and their boards were properly arranged to spell his announcement. The sign men were chased by a cross bulldog and got so tangled up in the rush to escape that when they reformed, as shown in the picture, the signs no longer presented his advertisement.

Can you figure out what must have been the merchant's original announcement?

A Charade

My first will range the meadow through,
  In savage pride and state;
But should he make my next at you,
  Your danger would be great.
My whole in russet cap is found,
  And robe of lovely green,
Tall, springing from the marshy ground,
  Like some bright Fairy Queen.

A Farmer's Word Puzzle

Fill in the blanks with words commencing with the same two letters.

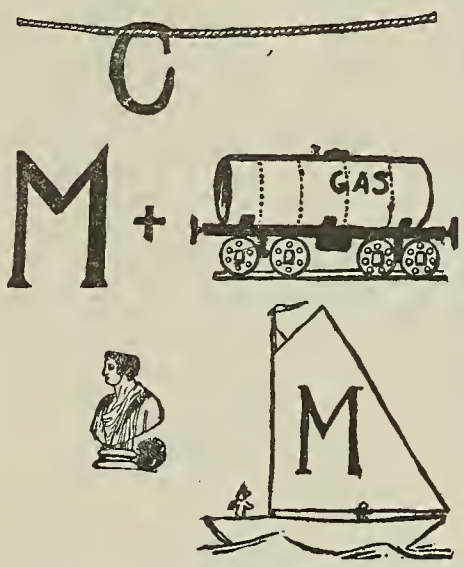
Farmer Jones did not ——— the ——— of last year's crop when he ——— a ——— harvest, but he also ——— a ——— ——— for sick animals. It helped on the ——— and ——— his bank account. This year, however, he did not ——— upon the ———, but ——— to profitable farming.

He ——— so many ——— ——— from ——— persons who wished to ——— him at the country fairs that he ——— to turn the ——— business over to his son.

His ——— were so ——— that he ——— his son with a gold ———, as he had helped to ——— the old homestead and ——— his finances.

Farmer Jones ——— some ——— works on the ——— of crops and the ——— of the soil, which may be said to be the ——— for his speedy ——— to prosperity.

Geographical Rebus Puzzles



Above are some puzzling names which the postal authorities had to grapple with. Can you decipher them?

Brain-Sharpeners

Why is a sporting clergyman like a soldier who runs from a fight? Because he departs from his sphere of action (fear of action).

When does a man impose on himself? When he taxes his memory.

Why are chemists and alchemists both of the feminine gender? Because one is an analyzer (Ann Eliza), the other a charlatan (Charlotte Ann).

Why should a man never marry a woman named Ellen? Because he rings his own (K)nell.

What is the difference between photography and measles? One makes facsimiles, the other sick families.

Answers to Puzzles in October 25th Issue

The answers to Concealed Geography were: 133, Hague; 134, Houlton; 135, Amoy; 136, Erin; 137, Persia; 138, Erie; 139, Texas; 140, Stralsund; 141, Natick; 142, Olga; 143, Palos; 144, Verona; 145, Houghton; 146, Bogota; 147, Angier; 148, Hereford; 149, Erie; 150, Lima; 151, Hayti; 152, Acre and Peru; 153, Cork; 154, Nice; 155, Oneida; 156, Genoa; 157, Thebes; 158, Taunton; 159, Lima; 160, Saugus.

The ham merchant started off with 55 hams and cleaned up $70 cash.

The answer to the charade is "Earnest."

The foreman received $1.10 for the first day and then 90 days at $1.11. The handy man 101 days $101. The helper put in one day at 90 cents, and 110 at 91, making it all 303 days' work for $303.

The answer to the rebus is "Orange."

In the Archery Puzzle, Miss Nellie Smith scored 17, 17, 17, 17, 16, 16=100.

In passing the Japanese Mines, the vessels had to take the following course:

Books, containing the finest collection of puzzles ever issued, will be distributed to the fifty sending the best answers to Sam Loyd, Box 826, New York City. When writing be sure to state which volumes have been received, so as to avoid duplicates, as there are twelve numbers.

Four Magazines for $1.00

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THIS is the biggest value for $1.00 ever offered. You can get the best City Weekly, the best Farm Papers and the best Home Magazine, together with an exquisite Art Calendar, all for **One Dollar,** if you act at once. Each comes for a whole year. You can have them sent to one or to different addresses.

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The Chicago Inter Ocean gives the latest national and world news fresh every week. The Inter Ocean is the greatest newspaper in the country going to farmers' homes.

Farm and Fireside has been greatly improved and enlarged at tremendous expense, making it the biggest and most progressive farm paper ever published. Interests all the family.

The Missouri Valley Farmer, the great paper of the corn belt, is of interest especially to those in the greatest farm section of the world. Packed with practical information.

The Household is the favorite magazine in over 500,000 homes. It has hundreds of pages of interesting stories. Many fine departments, fashions, cooking, poultry, gardening, etc.

The Beauty Calendar is the most beautiful Calendar ever made. It is an art masterpiece thirty inches long, lithographed in 12 colors, on handsome, heavy art paper. It is brass bound at top and bottom so it won't tear, with a patent hanger all ready to hang up. The pictures on the Calendar have been obtained at great expense, and represent the prettiest girls' heads painted in recent years. The Calendar will be mailed carefully packed in a tube, postage prepaid.

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1-Year Subscription—24 nos.
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The Missouri Valley Farmer
1-Year Subscription—12 nos.
The 1911 Beauty Calendar
Packed in a tube, postage prepaid.

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New or Renewal

Send for Them To-day

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FARM AND FIRESIDE, Springfield, Ohio

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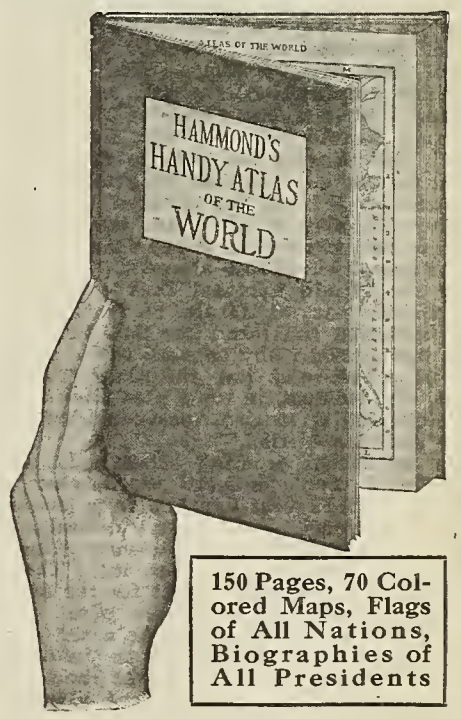
FARM AND FIRESIDE
Springfield - - - - Ohio

THE 1910 CENSUS

Just Ready With Famous Atlas

FARM AND FIRESIDE has just received the first consignment of the famous Hammond's Atlas, containing the latest revised 1910 census figures. These figures include the present population of all the cities in the United States having ten thousand or more inhabitants, and all state and territorial capitals. We feel sure every FARM AND FIRESIDE reader will want a copy of this comprehensive report, because each of you is interested in the growth and development of the towns, cities and villages in your state and you also wish to keep informed regarding the development in all parts of the United States. By special arrangement we are able to offer you, without cost, this splendid Atlas.

The 1910 census recently completed cost Uncle Sam $15,000,000 and the services of seventy-five thousand people.



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P. O.....State.....

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The Children's Associates

By Katharine A. Grimes

No question is more vexing to the mother of a family than that of her children's playmates. Every neighborhood has desirable and undesirable children in it, and it is almost impossible to govern the situation absolutely when it comes to the question of which class shall be the associates of one's own little folks. In spite of the greatest care, more or less mixing of the elements is inevitable, especially after children reach school age.

The first requisite looking toward the control of affairs in this respect is for the mother to get acquainted with as many as possible of the children with whom her own will probably be thrown. This is by no means an easy task, as few children are their true selves when an older person is about. If one can watch them when they think themselves playing alone, much can be learned of the personal characteristics of each child. No opportunity to do this should be missed.

The best source of information is usually one's own children. Every mother should encourage the full confidence of her little folks, and quietly lead them to tell, without reserve, all the small events of each day. Some may object to this as being a species of reprehensible tattling, but it is vastly different from the practice of "pumping" a child from motives of curiosity. It is easy to explain to him why it is all right to tell mother many things that it would be best not to mention to any one else. Children are all prone to confide in some one, and if it is not to be mother, it is sure to be some one else. Parental interest, and readiness to listen to all the small events of the day, trivial, yet so full of juvenile importance, may be made a real safety valve, preventing much mischief that might result from thoughtless chatter to an outsider.

To forbid one's boy or girl playing with certain other boys or girls is almost sure to cause hard feelings between the parents. But if the child himself refuses to play with some other child, nothing is thought of it. The safest and easiest way to get rid of undesirable playmates is to implant a distaste for their company by leading one's own children to see their most prominent faults. It takes great tact to do this without producing just the opposite effect by arousing a spirit of defense, especially if the playfellow in question be a favorite one. The beginning must be made in the abstract, by the early teaching of high ideals as regards morals and behavior. This foundation must be laid before the time of school begins.

One little lad came home from school, during his first weeks, full of the wonderful doings of a certain new acquaintance, with whom he seemed to be on the most intimate of childish terms. His mother soon gathered, from his artless prattle, that "Dick" was somewhat the older, and was much wiser in the ways of the world than she wished her small son's constant companion to be. She knew nothing of Dick's family or home surroundings, so had no way of gaining a personal knowledge of him unless she told Harold to invite him home with him. This she did not wish to do, as she might thereby encourage an altogether harmful intimacy between the children.

After thinking it all over, she decided that her best course was to pay a casual visit to the school where both attended. The first thing she noticed was that Dick occupied a seat directly back of Harold. A short period of observation convinced her that his influence was diametrically opposed to the interests of school-room law and order, so she finally decided that, in some way, Dick must be eliminated as much as possible from her boy's daily association.

On pretext of securing better light, she with little trouble induced the teacher to change Harold's seat for one in a distant part of the room. A slight eye difficulty to which he was subject gave excuse enough for the request, and her pleasant, "Thank you" amply repaid the teacher for the small inconvenience. So one great point was gained without any one being the wiser.

The next thing to do was to influence Harold, in some way of which he should be unconscious, to drop his present associate and substitute one less harmful. This was harder to do, as Dick exercised over Harold that peculiar fascination which an older and more sophisticated child often has for a younger. In vain were other boys invited to play in Harold's back-yard or to inspect his new bicycle. When he came from school Dick's sayings and doings occupied as much space as ever in his eager recital of the day's happenings. At last mother decided upon a master stroke. She had readily gathered that Dick often took advantage of the other boys in the little "trading" deals so common to school-boy days. Harold, in spite of all hints to the contrary, always looked upon these tricks as proof of his favorite's superior wisdom, and persisted in glorifying him for them.

As Harold's parents objected to this practice very decidedly, the little fellow had never been allowed to carry anything to school which he could possibly be led to trade off. So he was much surprised, and wildly delighted, when his mother one morning presented him with a beautiful, shiny, four-bladed knife, with the statement that it was his very own, to do what he liked with. He carried it proudly to school, exulting in a possession that would surely make him the envy of all "the other chaps." But his preoccupied air when he came home to dinner soon led to the disclosure that mother had fully expected—namely, that Dick had coaxed him to trade his fine new knife for a handful of worthless trinkets.

Harold had already begun to repent of his bargain, so it was not hard to convince him that his friend had deliberately swindled him out of his precious knife. It was a bitter lesson for the child, the loss of confidence in his childish hero being even more painful to him than giving up his treasure. But the intimacy ended at once, and with it went the secret longing to be allowed to "swap things" as the other boys did. Needless to add, mother felt that the half dollar invested in the knife had paid good interest.

Growing girls, especially, need the most skilful and tactful handling in regard to the control of their associates. It is comparatively easy for a mother to keep her daughter's confidence if she begins right. Most girls really value mother's frank interest in their affairs, especially if she takes an active part in the planning of their girlish pleasures.

"Isn't Mabel's mother the finest ever!" exclaimed one high-school maiden enthusiastically. "She is going to teach us a new step in that march we are practising for the exercises, and she says if we want to come to her house to try it, she will let Mabel treat us to ice-cream when we get through."

There is no danger of Mabel's resenting her mother's interference, even should it not coincide exactly with her own wishes. More than that, the mother has gained the liking and respect of her daughter's young friends, and is able to exercise an influence for good over many of the rest of them.

All this watchfulness means time and care and boundless tact. But in no part of the child's career are these so necessary as in those vital days between the first grade and graduation. These are the building days of manhood and womanhood, both intellectually and morally, and eternal vigilance is needed if the finished structure is to be straight and strong.

Winter Fun for Children

Generally healthy country children are able to plan their own fun during the pleasant summer and fall when they can live mostly out of doors. But when Jack Frost comes along, bringing the snow with him, they invariably look to mother to plan their amusements.

In our home we arrange first for the fresh air part of the winter's entertainment by providing warm coats, caps, mittens, overshoes and leggings, then the day is rare indeed that all of the children do not play outside some of the time. The brisk outing in the fresh air is both invigorating and hardening. Very, very seldom does the slightest symptom of a cold develop.

But with all this there must necessarily be many hours spent indoors, so it is best to make some definite provision for the children. I provided my three little daughters with a complete outfit for playing school, store, etc. The outfit cost only two dollars and seven cents and proved to be sufficiently varied to be entirely satisfactory. It included one yard of slated cloth four feet wide which their father made into a blackboard by mounting in a frame, three erasers, one box of chalk crayons, three kindergarten drawing-books, three lead-pencils, one box of combination drawing stencils, three pairs of kindergarten scissors, one box of assorted beads, three boxes of wax crayons, one dozen sheets of assorted colored tissue paper, one doll's patent clothes-line, one toy scoop, scales and weights.

The blackboard has proved useful for drawing, for various little games and for the elementary educational work that I hold should always be started at home.

The kindergarten drawing-books, accompanied by suggestive sheets of transparent (tracing) paper, made drawing enjoyable and satisfactory for even very untrained fingers, while many happy hours and some really interesting pictures resulting from the box of drawing stencils.

The assorted beads were of various sizes and multitudinous tints and were most effective as a quiet claimant of busy fingers and noisy little feet during the making of many necklaces, bracelets and embroidered belts for the inhabitants of dolldom.

Old merchandise and flower catalogues and discarded fashion sheets and certain magazines figured prominently in the scheme of entertainment. Picture-people were carefully cut out and bountiful wardrobes provided them with the assistance of tissue paper and crayons. Other pictures were made into scrap-books, framed and used in various ways. Two of the scrap-books were indestructible, being made of sheets of bright-colored cambric.

The toy scales were another great satisfaction, being the basis of many a special or general store. A few empty spice-boxes, baking-powder cans and small paper sacks, made realistic by a little sugar, more salt, bran, corn-meal and sand (all "clean" dirt, if spilled), and rounded out by the average endowment of imagination and inventive genius, fully equip the modern juvenile grocery.

It must not be supposed that an effort was made to keep active little people still all the time while indoors. There were times when bears and giants reigned supreme, and there were also other times when dancing and fairy-folk theatricals reigned supreme.

A Christmas Cinderella

[continued from page 20]

She nodded. "I am twenty-five. And you must be about thirty-four."

"Thirty-five," he corrected. "Listen to me, Lavinia, just a moment, before that porter comes to clear away. I want to tell you now, before anything happens—"

"What could happen?"

He did not answer her in words. On his watch-chain hung a plain gold locket, oblong in shape, with one of his initials cut in it. He pressed its spring and handed it to her. Inside there was a tiny snapshot of a girl's face, a laughing face, upturned, with wind-tossed hair and dimples.

"I've carried that in there for just ten years, Lavinia," he said.

It was nearly half-past eight when a closed limousine drew up before the Thurston home. Only Mrs. Olney remained at home of the family. The rest had gone to the ball.

Just how it happened only Grandmother Olney and Warner knew, but he had a chance to whisper a few explanatory words in her attentive ear, and Lavinia, her eyes aglow and her cheeks flushed daintily, followed the old lady up-stairs to her own suite of rooms.

"I think it will just fit you, dear child," said this delighted fairy godmother, as she drew from beneath the bed a long oblong chintz-covered box and opened it. Raising the folds of watered-silk paper, she lifted up a gown. Such a gown! The under petticoat was of heavy hand-embroidered satin, a soft, deep rose pink satin, with trailing rosebuds and delicate tracery of leaves upon it. And the overdress, with its pointed bodice of velvet and neckerchief of rare old lace, its polonaise of draped silk and long train, all in the palest green, green as delicate as the first faint lily blades of spring.

"My dear child, you look like an apple-blossom," said Mrs. Olney happily, as she dressed her rapidly. "Let me just dust some powder over those curls and stick in this shell comb of mine. There." She stood back to look at the slender little figure, in its gorgeous array of satin and velvet and clinging lace. "There, I am sure you'll please His Excellency, the Governor, now."

"As if I cared for His Excellency, the Governor."

"Bob," laughed Cinderella, as she leaned forward eagerly in the shaded gloom of the limousine, while it whirled through the town toward the capitol, "isn't it fun? Won't Aunt Mary and the girls be surprised? And Harold, too. He must be such a big chap now. He's in Harvard, isn't he? You had just finished, do you remember, that summer when I first met you, and I thought you were so terribly grown up and dignified. I'm glad you've succeeded, Bob, and are on the governor's staff. Are you a captain or a major or anything special?"

"Nothing special," replied Warner. "Only, I think I may be promoted to-night."

There seemed to be an air of subdued excitement at the capitol building, as they passed up the long steps and into the high vaulted corridor.

"How well everybody knows you, Bob," Lavinia's tone was full of a pride that she could not repress. It all seemed so wonderful. Her little chin was uplifted, her lips parted, her big eyes ashine with pure happiness, as they entered the anteroom without the great assembly hall that was turned over to the Colonial Dames for Christmas Eve. And suddenly an idea occurred to her.

"What's the governor's name, Bob? I forgot all about it."

Before Warner could answer, Mrs. Thurston emerged from a group just at the entrance doors. She was gorgeous in her gown of ashes of violet velvet and the Thurston pearls around her throat. But she stopped at sight of Bob Warner and Lavinia.

"We've been snowbound," explained Warner gently. "But we've had a bully time, Mrs. Thurston, and it's entirely my fault. I insisted that Miss Somers come to our ball to-night. Doesn't she make a perfect colonial dame? I think myself that the general would rise from the tomb at Mount Vernon just to tread one stately measure with those rose satin slippers."

Mrs. Thurston was a clever woman, and she was a diplomatist. She smiled and kissed Lavinia fondly and complimented her on her appearance, and suddenly they two stood alone, while Warner fairly vanished in a group of men who had hurried up to him.

"You had better come with me, dear, and meet the girls," said her aunt. "It is only a little past nine, after all, and they will hardly start the cotillion before ten. We're always a bit more formal at these state affairs than we are socially, and the governor likes early hours. I must find you a partner, too."

"But I have one," said Lavinia quickly. "Bob asked me to dance it with him."

Mrs. Thurston, for the first and only time in her life, lost her presence of mind. She lifted her eyeglasses in holy horror and stared at Lavinia's flushed face.

"Bob! Bob!" she exclaimed. "Are you speaking of Governor Warner, Lavinia?"

But Lavinia likewise came of sturdy colonial stock, and right proudly and gently she replied, even while her heart beat at the wonderment of it all, and Cinderella seemed only a beggar maid in the joy that had come to her this Christmas Eve, "If Bob is the governor, then I mean the governor, Aunt Mary."

"Does anybody know?" asked her aunt.

"I think Great-Aunt Margaret knows, for she gave me her gown to wear and she saw Bob place this ring on my hand."

"Well, all I can say, Lavinia, is this," Mrs. Thurston spoke firmly and impressively, "either you are a remarkably clever girl or you are the most fortunate Cinderella that ever found her prince incognito."

She paused as they entered the great lofty-ceiled hall with its great chandeliers and stately grandeur. Somewhere a military band was playing deliciously. There was an indefinable fragrance in the air of flowers and perfume. All of the ladies were dressed in colonial fashion, and, except for those in uniform, the men wore the black velvet and knee breeches of Washington's time. Belle and Rosalie in sprigged mull, hurried to greet their Cinderella cousin, and Harold smiled most aggravatingly at them, for he had caught the whiff of rumor so soon.

And just at ten, when there came an expectant lull in the great room, a figure clad in black velvet, who might have stepped from one of Gilbert Stuart's canvases, bowed low over Lavinia's little hand that wore the olivine seal cut with the monogram, R. L. W.

—Robert Lewis Warner.

"Will you tread one measure with me, my lady?" he whispered. "Merry Christmas, dear."

Looking Backward and Ahead

[continued from page 22]

isn't any more important to carry crops across the water than it is to make the crops. Who wouldn't have said a hundred years ago that it was perfectly crazy to think of sailing to the eastward when a strong wind was blowing from the eastward? Why, you couldn't any more do that then than you could fly. (You got that about "flying," didn't you?) The steamship has conquered the weather, yet what farmer does not feel sometimes like offering a burnt sacrifice if he thought the Mysterious Powers would be put in a good temper by it and send the rain when everything is parched to a crisp or stop the rain when everything is swimming, and his good top soil is running off into rivers where it's no good to him or anybody else? Being so dependent upon the weather is kind of barbarian, if you want to know what I think about it.

Let's turn our imagination loose. Take off the halter-strap and give our imagination a smack on the flank and let it run wild. Let's suppose we had a whole farm under cover high enough up so's you could plow under it. Like they raise shade tobacco, only, instead of slats, let's have glass or muslin soaked with linseed-oil or maybe a tough kind of paraffin paper—I don't care. Something that will let the sunlight in and shed the rain. Put a high tight board fence around it, same as shade tobacco has. Fix it so's you can ventilate it and control the temperature. Now there is enough moisture from the clouds in the course of the year for the crops of the year, only it isn't distributed with any sort of judgment for our purposes. When we want it to come, it doesn't come; when we don't want it to come, it comes a-pelting and washes off the top-soil and packs it down, and anyhow it falls on the surface of the ground, whereas, the roots of the plants we want to grow are under the surface. Let's suppose that the rain ran off the roof of your farm into tanks from which it could be conveyed to the roots of the plants as required, just enough and no more.

Now then. Has anybody a doubt that regulated temperature and controlled soil-moisture would increase the crop-yield? Has anybody a doubt that a growing season lengthened by trapping the sun's warmth and shutting out the cold winds would permit of more than one crop a year off the soil? Has anybody a doubt that a man could prophesy to the bushel just how much he could raise? Has anybody a doubt that the ability to work under shelter from the weather would be profitable?

Impracticable? Oh, certainly. I'm aware of that. Nobody raises carnations under glass, or fruits or vegetables or any other sort of plants. We're just letting our imagination run wild.

Capital? Nobody could ever raise the capital with which to carry out such a bare-brained proposition. Capital is timid. If it could be figured out that there was a reasonable chance to make a net profit of ten per cent. on such an investment, Capital would shake its head and say: "Huh-uh! I dassen't." These multi-millionaires have all the money they want; any more would just be a bother to them.

But it's a pretty dream, isn't it? It's a nice thing to think about because it shows you that it is (theoretically, at any rate) possible to supplant the fortuitous conjunctures of the seasons by a reasoned procedure based on a systematic knowledge that growing plants require so much moisture and so much sunlight to give the largest possible yield for a given amount of labor-time. It's a pretty dream.

When we come out of it, we shall resume, where we left off, our grumbling about the weather that won't rain when the crops need rain so badly, and won't stop when everything is swimming, the weather that blows from the east when we want to sail east.

Agriculture is not yet on the third level. It is still an Art and not a Science. But some day—some day—

Patterns for Every-Day Clothes

Designs By Miss Gould

THE very good-looking morning dress shown on this page in pattern No. 1548 will be a useful addition to any woman's wardrobe. The pattern is most economical. Its price is but ten cents, including the smart-looking skirt and two shirt-waists. Either of the shirt-waists may be joined at the belt to the skirt. The shirt waist with frill is illustrated as a separate pattern, however, and can be made up in that manner to be worn with different skirts. If desired, two or three different frills may be made for the waist. In this case they should be finished with half-inch bands of lawn, each band being four and one half inches long. Then the frill may be basted to the waist and removed at any time. Fine lawn edged with lace makes an attractive frill.

No. 1635—Double-Breasted Overcoat

Pattern cut for 4, 6, 8, 10 and 12 year sizes. Quantity of material required for the medium size, or 8 years, three and one half yards of thirty-six-inch material, or two and one half yards of fifty-four-inch material

A VERY serviceable wrapper is shown in pattern No. 1456. Though the back is rather tight fitting, being in princesse style with the seams running full length, the front is loose, making the wrapper a very comfortable one. To give it a trim look a ribbon belt may be added, though it may be worn with the fullness simply hanging in soft folds from the round yoke. The woman who has a number of wrappers but needs an attractive dressing-sacque will find pattern No. 1540 to be just what she wants. Though loose and comfortable it looks somewhat like the new waists which are finished with big sailor collars. The collar on this sacque may be scalloped at the edges, or trimmed with narrow embroidery insertion, the trimming on the cuffs and belt matching.

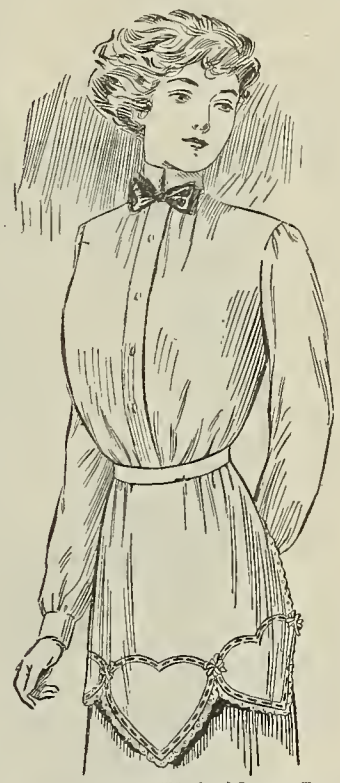
No. 1540—Dressing-Sacque With Sailor Collar

Cut for 32, 34, 36, 38, 40, 42 and 44 inch bust measures. Quantity of material required for medium size, or 38 inch bust, four and three fourths yards of twenty-two-inch material, or two and seven eighths yards of thirty-six-inch material, with insertion for trimming

No. 1634—Single-Breasted Russian Suit

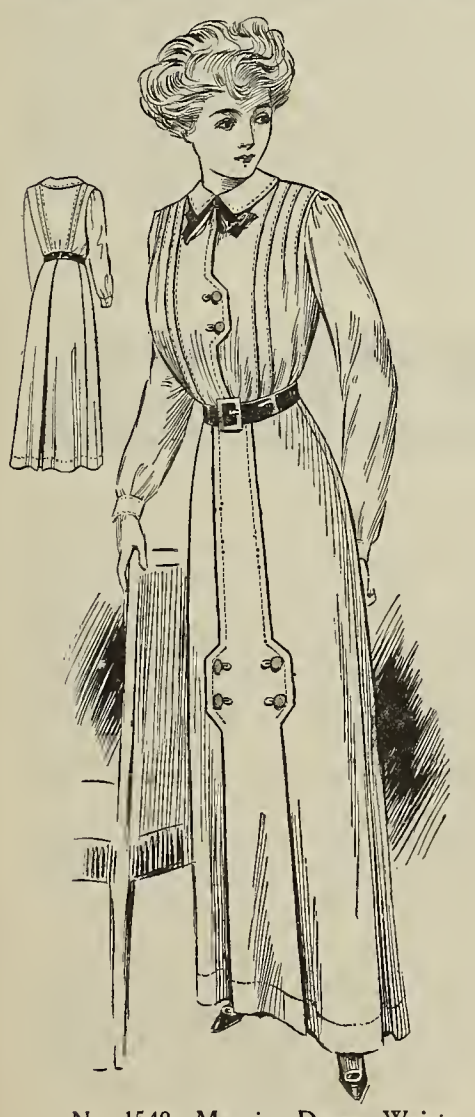
Pattern cut for 2, 4, 6 and 8 year sizes. Quantity of material required for medium size, or 4 year size, four and one half yards of twenty-four-inch material, or three yards of thirty-six-inch material, with one fourth of a yard of contrasting material for trimming

This smart-looking shirt-waist with side frill can be made from pattern No. 1548



No. 1662—Apron With Heart Border

Pattern cut in one size. Material required, seven eighths of a yard of thirty-six-inch material, two and three eighths yards of edging, one and one eighth yards of beading and a piece of baby ribbon. This is a very attractive design for a dainty sewing apron



No. 1548—Morning Dress—Waist in Two Styles

Pattern cut for 32, 34, 36, 38, 40 and 42 inch bust measures. Quantity of material required for medium size, or 36 inch bust, nine and five eighths yards of twenty-four-inch material, or five and seven eighths yards of thirty-six-inch material. The waist and skirt are joined with a belt making a one-piece dress that buttons in front. The waist may be used as a separate pattern, worn with a standing collar and frill

Woman's Home Companion Patterns

The woman who makes her own clothes and wants to be well dressed should use WOMAN'S HOME COMPANION patterns. Not only are they very simple, but every garment made from these smart, up-to-date patterns is sure to be a success.

Illustrated on this page are some very practical designs for the busy housewife. They are all ten cents apiece and one or two of them are sure to meet the requirements of every woman who sees this page. An order addressed to the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City, inclosing ten cents will bring you a pattern that is worth just ten times ten cents.

We have a liberal offer to make you in regard to these patterns. Here it is: We will give one WOMAN'S HOME COMPANION pattern if you send us only one new yearly subscription to FARM AND FIRESIDE at fifty cents. The subscription must be for some one not now a subscriber to FARM AND FIRESIDE. Send orders to the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City.

Follow these directions when ordering patterns: For ladies' waists, give bust measure in inches; for skirts, give waist measure in inches; for misses and children, give age. Don't fail to mention the number of the pattern. Satisfaction in all of our patterns is guaranteed.

No. 1456—Wrapper With Princesse Back

Pattern cut for 34, 36, 38, 40 and 42 inch bust measures. Quantity of material required for medium size, or 38 inch bust, eight and three fourths yards of thirty-six-inch material, or seven and one fourth yards of forty-four-inch material. This trim-looking wrapper makes a practical and serviceable housework dress. It looks especially well when made of one of the pretty mercerized silks. They come in a number of different floral and conventional designs and are inexpensive

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THE WAY OUT

From Weakness to Power by Food Route

Getting the right start for the day's work often means the difference between doing things in wholesome comfort, or dragging along half dead all day.

There's more in the use of proper food than many people ever dream of—more's the pity.

"Three years ago I began working in a general store," writes a man, "and between frequent deliveries and more frequent customers, I was kept on my feet from morning till night.

"Indigestion had troubled me for some time, and in fact my slight breakfast was taken more from habit than appetite. At first this insufficient diet was not noticed much, but at work it made me weak and hungry long before noon.

"Yet a breakfast of rolls, fried foods and coffee meant headaches, nausea and kindred discomforts. Either way I was losing weight and strength, when one day a friend suggested that I try a 'Grape-Nuts breakfast.'

"So I began with some stewed fruit, Grape-Nuts and cream, a soft boiled egg, toast and a cup of Postum. By noon I was hungry but with a healthy, normal appetite. The weak languid feeling was not there.

"My head was clearer, nerves steadier than for months. Today my stomach is strong, my appetite normal, my bodily power splendid and head always clear."

Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

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OUR YOUNG FOLKS' DEPARTMENT

Conducted by Cousin Sally

"Bad-Weather Bob's" Christmas Eve

By Arthur Morgan Langworthy

His patrons called him "Bad-Weather Bob," and knew him as the hustling young head of the "Bad-Weather Boys." So it is doubtful if they would have recognized his official title of "Robert Allen, Manager the Storm Protective Service."

Yet it all meant the same thing.

His mother had greatly wondered a month before this Christmas Eve, when he suddenly became apparently insane over the subject of old umbrellas. Every moment he could spare from school and his legitimate business as a paper-delivery boy was expended in a search for the umbrellas. He paid cash for some, but was always careful to turn in his little share that helped mother pay for their few rooms.

It had taken Bob months to save that cash, which shows he was evidently following a fixed idea. Finally he possessed a dozen umbrellas. The next move consisted in rounding up a dozen of the neighborhood boys.

Bob made them his proposition, which they accepted—and the Storm Protective Service started right in to protect.

Its territory embraced a wide area whose center point was one of the outlying stations of the New York Subway in the Bronx, where it is still almost country. Its success (in stormy weather) was instant. Many an umbrellaless lady testified to the truth of Bob's oft-repeated remark:

"They ain't much for looks, lady, but they'll keep the weather from spoilin' your looks!" After which one of his boys would escort the lady home under one of the old umbrellas at a carefully graded price according to the distance from the subway.

But not even Bob's "employees" knew the real purpose that created the Storm Protective Service. They looked on him as an umbrella plutocrat who took fifty per cent. of these earnings and whose sole object was gain.

Yet they couldn't be expected to know when neither did his mother nor little sister Phœbe. A year ago for the first time in her life Phœbe had no Christmas tree. This coming Christmas Bob vowed "should be different." He got his idea from noticing boys stand around some of the other subway stations offering to act as umbrella escorts rainy nights, and he intended to make the great scheme yield a Christmas tree.

Still he was compelled to acknowledge defeat after all his bright prospects as he stood alone in the glass hood of the subway entrance on this stormy Christmas Eve. Twelve-year-old Bob always kept his promises, now he would have to break one, for he had solemnly promised Phœbe that Santa Claus would bring her a tree. Unfortunately there had been too much good weather during the past month; consequently too much "bad business." Bob still lacked the amount he required.

Yet if the boys would only stand by him to-night, he might still succeed and keep his promise. But he let them carry home the umbrellas for protection against last night's heavy storm—and now he had neither the boys nor umbrellas. Evidently the weather was too bad even for "Bad-Weather Boys."

Six o'clock passed and the great home-coming throng surged out of the entrance in ever-increasing numbers, while poor Bob was forced to stand there watching untold wealth slip by. He spied at least fifty prospective customers; he could have tripled his force of "Bad-Weather Boys" and yet had work for more as the storm outside steadily developed into a blizzard.

Still he would not give up hope. "Maybe some of 'em will come after dinner," he said to himself as he refused numerous offers to hire out personally. Bob didn't dare to go. If any of the boys came, their leader must be here to direct the work. But seven o'clock went by and with it any lingering chance to reap the harvest of the snow-storm. Still hopeful little Bob hung around the entrance to the subway now cold, tired and supperless.

He was almost ready to give up and go home when a well-dressed boy about his own age appeared. The stranger poked his head out into the blizzard and then drew back with a dismayed look. He carried no umbrella, but his fur-trimmed overcoat seemed ample protection to Bob's envious eyes.

"Want to sell that umbrella?" asked the other boy. Bob was willing and the buyer explained that he wished to go to a certain house where he was to spend Christmas with his uncle. Bob offered to show the way at the regular rate, but the other disdainfully refused his escort, saying boastfully "he'd never been lost yet."

Bob watched him plunge into the storm and slowly cross to the opposite corner. Two streets converged here at an angle and Bob could but very indistinctly make out the dim figure in the blowing and whirling snow as the other boy reached them.

Then Bob saw him turn slowly down the wrong street.

"Let him go, he was too 'fresh' when I offered to show

"Want to sell that umbrella?" asked the other boy

him!" exclaimed Bob as he started to plow homeward through the drifts. But it was bad going and the difficulty he encountered queerly enough set him to thinking about the other boy. If he, Bob, was having such hard work to keep on the right track, what about the other boy who was on the wrong track and who was smaller than he?

He took perhaps ten more steps homeward before he made his decision. Then he stopped and laboriously began to return.

"There ain't a house on that street and I guess I'd better go after him," was his anxious thought. But it was no easy work. The high wind piled the drifts up waist-deep, yet he could still see the track evidently broken by the other boy in the snow and he doggedly followed it.

He waded perhaps three blocks with no sight of the boy ahead, and just as he was beginning to doubt whether he might be mistaken in the direction after all, he saw a dark object in the snow.

A second later he picked up the wreck of his umbrella and then his ears caught something besides the moan of the gale. He felt sure he heard a cry and this proved to be correct. For two hundred feet ahead he finally caught up with the other boy, leaning up against a fence utterly exhausted.

To this day Bob couldn't tell you how he managed to bring him home. He has a blurred recollection of being vigorously rubbed with snow and gulping down hot drinks, and he awoke Christmas morning to find the other boy sleeping alongside of him.

Bob anxiously looked at the clock. He was hours late on his delivery, but the storm was over and he felt little the worse for that awful Christmas Eve. He decided not to wake the other boy or his mother, but get up and deliver his papers. And he quietly left the house with a very heavy heart, for this was Christmas morning and still it wasn't "different."

Bob slowly made his way through the snow to the news-stand by the subway, where the papers were distributed to the route-boys. He found more trouble here, for the angry newsman, unwilling to make any allowances for the storm, had given another boy his place. Poor Bob! His great Storm Protective Service had not only failed to accomplish its purpose, but had succeeded in losing him his job, and on Christmas morning, too!

He was about to leave the store, sick and disheartened, when a half-opened newspaper caught his eye. Bob looked at the picture on the page again, growing more astonished every minute. He hastily fished up a cent, bought the paper and started home as fast as he could scale the giant drifts.

The other boy hadn't moved. He still slept, but Bob was not so considerate this time. He shook him by the shoulder and poking the paper into his sleepy face almost shouted:

"Say, is that you? Are you Herbert Jennings?"

"Where—where am I—who are you—how'd you get here? Of course, I'm Herbert Jennings—but—"

"Hooray!" Bob waited no more, but rushed off to awaken his mother.

And no wonder! The picture he had seen was that of the boy he'd found last night when on Storm Protective Service duty—and there was a big reward for any information that might lead to his whereabouts, as he had disappeared in the great storm.

Fortunately young Jennings suffered no ill effects from his exposure and this time was only too glad to allow Bob to escort him to his uncle's, where the reward was paid as soon as he told his story.

And maybe Bob didn't rush for the nearest tree store! The tree was not dressed and ready until noon, but when it was, little Phœbe's joy repaid him for all he had gone through. The money still remaining from the purchase of the tree amounted to more than Bob could have earned in a year. This he slyly made into a package addressed to his mother. And as he watched her delight when she opened it, Bob chuckled:

"Well, I guess the Storm Protective Service was a pretty good Santa Claus after all! Wasn't it, mother?"

Cousin Sally's Letter

Dear Girls and Boys:—

I am hoping that this letter will reach you before the 25th, for I do want to send you all my fondest and heartiest wishes for a Merry Christmas. Dear me! It seems only a month ago when you were all writing to me about the good times you were having during vacation. And here we are almost face to face with a new year.

Have you boys and girls made any resolutions this year? I can hear you all say in chorus, "Yes, lots of them." Is there room for one more? Well—I am going to take it for granted that there is and ask you to keep one resolution for me. It is this:

RESOLVED, that I shall take the keenest interest in our own page in Farm and Fireside this coming year, meaning that I shall take part in all our monthly contests and do all in my power to make our page a success.

Do you think this would be a very hard resolution to keep? I have resolved to make our department bigger and better this year and I am going to put my whole heart into the work. But I *can't* do it alone. You and *you* and *you* must help me! I have quite a few plans stored away in my mind, but you shall hear of them a little later.

Before I say good-by I want to ask you a question, and I hope you will all answer it. Here it is: Has this page of ours pleased you this last year? If so, what in it appealed the most to you? If the page has not pleased you, tell me frankly what it lacked and also just what you would like to see on your own page.

There! I didn't mean to ask you so many questions when I started out, but I do hope you will sit down right this minute and send me a letter. I want to make our department for 1911 better than it has ever been, and I shall be more able to do it if you will tell me what you like and what you do not like. Tell me what kind of contests you prefer, also if the stories in our department have pleased you. Don't be afraid of being too frank. I want the *honest* opinion of this page from every girl and boy.

Now good-by to you. Don't forget about our club. The work is going along splendidly, and I am delighted to see that we have so many enthusiastic and eager club members. The button costs five cents and you can obtain one by addressing Cousin Sally's Club, Farm and Fireside, 11 East 24th Street, New York City.

With love to you all and hoping to hear from you soon,

Faithfully always, Cousin Sally.

Prize-Winners in September 10th Contest

Cora Dunivent, age ten, Greensboro, North Carolina; Nellie F. Sipes, age sixteen, Emmett, Kansas; H. Vinton, age twelve, Findlay, Ohio; Myrtle Fowler, age twelve, Lytton, Iowa; E. Peterson, age fifteen, Minden, Nebraska; Eloise Case, age fifteen, South Royalton, Vermont; Ruth Randolph, McGaheysville, Virginia; Ida C. Kline, age sixteen, Bovina, Mississippi; Lillian C. Douglas, age sixteen, East Granley, Connecticut; R. Kepler, Knoxville, Maryland; Eleanor S. Canter, age nine, Charlotte Hall, Indiana.

Honor Roll

The following cousins deserve honorable mention: Hila C. Wicks, Herbert Eggerstedt, Mary Young, Gladys Gross, Ethel Parmele, Laura Kerkhoff, Geneva J. Caines, Julia Haege, Edna C. Gundrum, Minnie F. Hasker, Lydia King, Ora M. Man, Elizabeth Smith.

Prize-Winners in October 10th Contest

Bert Culbertson, age fourteen, Jackson, Mississippi; Ethel Bair, age fourteen, Dupont, Ohio; Frances Grinstead, Morresville, Missouri; Eunice Meyers, age fourteen, Keeline, Wyoming; Hilda Luedecking, age fifteen, Gableville, Michigan; Olive Mangold, age sixteen, Carrolltown, Pennsylvania; Willie F. Adams, age ten, Yoakum, Texas.

Monthly Prize Contest

Just because the contest notice was not printed in last issue does not mean that these monthly contests are to be discontinued! By the time I printed the two Christmas stories there was not a bit of room left for your letters or for the contest notice. So we shall have it this time. Take part in it and see if you can't win one of the prizes.

For the ten best verses on either of the following subjects, "I Wish," "My Little Pussy," "Merry, Merry Sleigh-Bells" and "The Skating Pond," we will give prizes of books and water-color paints.

Do not write more than five verses. Write in ink on one side of the paper only, with your name, age and address in the upper corner.

The contest is open to all boy and girl readers who are seventeen years of age and under. The poem must be indorsed by parent or guardian to show it is your own work.

Contest closes January 15th. Address Cousin Sally, Farm and Fireside, 11 East 24th Street, New York City.

Cousins Wishing to Correspond

Hughie E. Goben, Marysville, Indiana; Katherine Howell, White Rose, Kentucky; Beulah O. Stovall, age sixteen, Oscar, Kentucky; Mary Nellie Baumgarden, age eleven, Ipova, Illinois; Harry Vaughan, age fifteen, R. R. 4, Fairfield, Illinois; Alonzo Walker, age fifteen, R. R. 4, Fairfield, Illinois; Alva Walker, age sixteen, R. R. 4, Fairfield, Illinois.

Dear Cousin Sally:—

I must write and thank you for the dear little club button. You can't imagine how glad I was to get it, and to know I am a member of Cousin Sally's Club. I shall keep the rules and always remember you and our dear little club every time I see my button.

Your loving cousin, Doris Cuneo.

R. D. 1, Box 37, Vicksburg, Mississippi.

Poor Relations

[CONTINUED FROM PAGE 18]

"Dickens and Burns," he replied instantly.

"Good," she laughed with pleasure. "We'll have prints of all their famous characters, all the great ones from David Copperfield to Highland Mary. Last of all, the mantel-shelf would hold a clock, and photographs of your friends."

She paused and gave a little sigh of relief. "I think that is all. On a winter's afternoon when fragrant logs are crackling in the fire-place such a room ought to be really comfortable!"

Her listener nodded his head silently, and as though rousing himself, he queried almost incredulously, "Could you really make this library look the way it sounded?"

"Why, yes," Penelope answered.

"Well then," the man drew a long breath, "I'm going to leave everything to you. George, I think you'll give me more than a house, it will be a home." She smiled her pleasure at his approval, then they began a more businesslike conversation which lasted until Penelope had to be rushed to the station to make her train.

Once aboard she closed her eyes wearily, and instantly there leaped before them a vision of a man's face, serious and listening; slowly, little by little lighting up with the brightness of enthusiasm. A half smile of pity touched her lips. "Poor Mr. Shreve," she thought, then a warm sense of gladness filled her as she remembered his voice as he said so wonderingly, "I think you'll give me more than a house, it will be a home."

Her feeling of satisfaction did not forsake her even after she entered Pierce's, but a little later all was changed.

She came storming into their little rooms, scarlet-cheeked, her eyes burning with indignation.

Marion, who since her interview with Hastings had run the whole gamut of moods from satisfaction to despair, looked up, shocked. "What is it, Pen," she cried in alarm, "what is it, honey?"

"I've resigned my position," her sister blurted out furiously. She sank into a chair, while scalding tears poured down her face.

"Resigned!" Marion repeated dazedly. "Why in the world—"

"Because I wouldn't stay there another day if we starved, not another minute!"

The younger girl paled. "What happened?" she whispered. "What is it, Pen? For goodness' sake tell me."

"Well," the tall girl sat up, her eyes glittering. "Mr. Granger, the junior partner, and I were in a dim room trying the effect of different studio fabrics. I—I leaned up against the wall and half closed my eyes to get the effect of a violet frieze when he suddenly grabbed my hand and tried to pull me to him!" The girl shuddered. "I wrenched myself free and just stood petrified for a moment. Think of it, Marion! He dared to touch me and he—a married man! I never was so humiliated and furious in my life. I fairly flew to the office, wrote my resignation and came home. Oh, honey, whatever are we going to do?"

For a few moments Marion held her sister close in silence, then Penelope freed herself and stood up. The sight of Marion's wet cheeks restored her courage. A sense of responsibility strengthened her spirits.

"Just let's try to forget it," she pleaded, "we have the future to consider and perhaps it will prove a good thing in the end. I am sorry about Mr. Shreve's commission. We had laid such lovely plans."

Suddenly Marion looked up hopefully. "Pen," she cried, "I've such good news. Mr. Hastings has given me a position. I'm to be a society reporter on the *Chronicle*."

Into the older girl's face came a look of comfort. "Tell me about it, dear," she whispered, "let's be thankful that one of us is succeeding."

Chapter IX.

An uneventful week passed by. Marion began her newspaper career, but her duties were rather hum-drum and uninteresting. Mr. Hastings, true to his resolve, inquired into her progress twice, and on both occasions the two had chatted together in the friendliest fashion. Marion's manner was not that of the subdued employee. She had no sense of business etiquette.

Penelope had not succeeded in getting another position, and her black eyes seemed to grow larger as her face paled from worry.

On Friday noon came occurrences which changed utterly their preconceived plans.

That morning Marion had received a check for one of her little stories. It was only for ten dollars, but each one of them had loomed large in promise. "Oh, Sis," the girl had caroled, waving the precious little slip, "isn't it wonderful when you can do anything well enough to make other people pay for it? Let's celebrate. Let's go to tea again."

"No, dearie," Penelope sighed, "we need the money too badly for bread and meat. When I get started again will be the time for a 'jollification.'"

"Well, hurry out. You have several places to go, haven't you?" Marion had laughed, "because if I ever felt like having some fun, it's this minute."

The two girls arranged to meet each other at noon and have lunch together.

Penelope went out with a lighter heart than she had carried for a whole week.

However, when they met at noon her face was serious. "Marion," she began, as they seated themselves at a table, "I was near the hotel, so I stopped in before coming here. There were two letters, I haven't opened them yet. I was late, besides one is from the St. Paul lawyers. I positively dread to read it, and the other is readdressed from Pierce Brothers. The last time the lawyer wrote it was about some taxes to be paid—"

"Great goodness," Marion exclaimed, "let's open the other one first; keep the worst for the last."

Penelope tore open the white envelope and read the letter hastily.

"My Dear Miss Martin:—

"The day after your evidently unexpected resignation from Pierce Brothers, a young gentleman called to continue your work, and every day since then I have unceasingly regretted the change. In short, nothing has gone right. Your plan for making this house a comfortable home pleased me; the young man Pierces have sent seems determined to turn it into a bric-à-brac and antique shop.

"Now to the point. It has occurred to me that there is no reason why I should not have you undertake my commission privately, or if you have already connected yourself with another firm, I will transfer my order to them. Kindly let me know the conditions and your decision as soon as possible.

"Trusting that this letter will reach you, as I know no other address than Pierce Brothers, I am,

"Very sincerely,
"Arnold E. Shreve."

"The dear old thing!" Marion cried as Penelope stopped. "Indeed, you will do his work privately. Won't you, honey?"

"Indeed, I will," the girl replied. "Odd, he should have taken such a fancy to my way of furnishing. I just planned the kind of rooms I would like for myself."

"Now open the other letter," her sister suggested. "It's a shame to have it come on a happy day."

Penelope tore open the envelope, revealing a type-written sheet and one in handwriting.

"Read them aloud," Marion commanded, "I can't stand waiting."

The soft voice began obediently:

"My Dear Miss Martin:—

"It gives me great pleasure to inform you that a small sum of money has been returned to us for you. Your uncle, Mr. Stephen Chase, your mother's brother, refuses to accept the money due him for his mortgage on your father's house. In explanation of his kind action, I think it best to inclose his own letter. As soon as I receive a reply I will transfer the money to your account.

"Assuring you of my personal pleasure in making this communication, and wishing you all success in your New York ventures, I am,

"Very cordially,
"Clarence Bronson."

"Did you ever!" Marion gasped. "I always thought Uncle Stephen was as sour as a crab-apple! I do believe the world is full of angels, after all. Go on, read uncle's letter."

Penelope's voice was unsteady with excitement, but she went on:

"Messrs. Bronson & Sweeney, Dear Sirs:—

"Your letter received this day, and I beg to inform you that I do not desire the money on my mortgage, and what is more, I will not accept it.

"It is quite true that while my brother lived, I always demanded full interest and all lawful dues, but taking money from a man for his justly incurred debts, and taking it from his orphan daughters are entirely different matters. I herewith return to you the canceled mortgage.

"Kindly let me know my nieces' New York address, and I will write them personally. In the meantime see that the two thousand dollars due me is sent to them.

"Hoping that I have made myself clear and expecting an immediate reply, stating that my requests have been acceded to, I am,

"Very respectfully,
"Stephen Osborne Chase."

Both girls' eyes were wet, and Penelope's voice utterly broke as she read the letter.

"How beautiful!" she whispered. "Dear old uncle. We oughtn't to take the money. He isn't rich himself."

"We can't help ourselves," Marion laughed chokingly. "You can tell by the tone of his letter that our uncle has a will of his own."

There was a moment's happy silence, then Marion clasped her hands excitedly. "Sis, Sis," she cried, "I have an inspiration. We'll use the money to start you as a decorator on your own account! You can take an office and send out cards, and with Mr. Shreve's order to begin with, I just know you will succeed. Please do it, honey, please do it."

"No, indeed," Penelope protested. "I wouldn't think of using all the money. It's as much yours as mine."

"Oh, you goose! Wouldn't I help you spend all you earned? I just wish I had the chance!"

"But—"

"I can't argue—I'm too happy—besides, I'm due at the office in a minute. Meet me in the *Chronicle* Building at five o'clock, Pen, and we will have our 'jollification' after all!"

[CONTINUED IN NEXT ISSUE]

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Many pale, sickly persons wonder for years why they have to suffer so, and eventually discover that the drug—*caffeine*—in coffee is the main cause of the trouble.

"I was always very fond of coffee and drank it every day. I never had much flesh and often wondered why I was always so pale, thin and weak.

"About five years ago my health completely broke down and I was confined to my bed. My stomach was in such condition that I could hardly take sufficient nourishment to sustain life.

"During this time I was drinking coffee, didn't think I could do without it.

"After awhile I came to the conclusion that coffee was hurting me, and decided to give it up and try Postum. I didn't like the taste of it at first, but when it was made right—boiled until dark and rich—I soon became very fond of it.

"In one week I began to feel better. I could eat more and sleep better. My sick headaches were less frequent, and within five months I looked and felt like a new being, headache spells entirely gone.

"My health continued to improve and today I am well and strong, weigh 148 pounds. I attribute my present health to the life-giving qualities of Postum."

Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Household Department

Good Date Recipes

Among the most nutritious of foods is the date, which forms the principal article of food of a large proportion of the inhabitants of some of the tropical countries. Although a delicious fruit, and not expensive, it is too seldom found on the American bill of fare.

Date-Custard—To one quart of milk add one cupful of sugar, a small piece of butter and, when boiling, thicken with corn-starch and flavor with a teaspoonful of almond-extract. Add two cupfuls of stoned dates and set on ice until served.

Date-Cream—Stone and chop one cupful of dates and add them to one pint of slightly sweetened whipped cream, whip all together until solid, flavoring with any desired extract. Serve very cold.

Date-Bread—A delicious variation in the bread line is made by adding dates. Stone the dates and cut across in three or four pieces, allow a cupful for a small loaf of bread, kneading them into the dough before putting it into the pans to rise the last time. Raise and bake as usual.

Date-Buns—When making bread save out three cupfuls of the raised dough, mix with it one and one half cupfuls of white sugar, one half cupful of butter, two eggs, one half teaspoonful of soda, one fourth of a teaspoonful each of extract of cinnamon and nutmeg, and two cupfuls of stoned and chopped dates. Add flour to mold and set to rise. When light, mold and make into buns, let rise until very light, bake quickly, and as soon as taken from the oven glaze with a mixture of two tablespoonfuls of white sugar dissolved in three of sweet skim-milk.

Date-Gems—Two cupfuls of sweet milk, one well-beaten egg, one large spoonful of butter, one teaspoonful of baking-powder, a little salt, three cupfuls of flour and one cupful of stoned and chopped dates. Beat well and bake in gem-pans in a hot oven.

Date-Cereal—When cooking a breakfast cereal of any kind add one half or one cupful, according to quantity, of stoned and chopped dates just before taking from the fire. Serve with sugar and cream as usual.

Brown Bread With Dates—One egg, one half cupful of molasses, one cupful of sweet milk, one of sour milk, butter the size of an egg, one half teaspoonful of salt, one rounding teaspoonful of soda, one cupful of white flour, one and one half cupfuls of Graham flour, one cupful of corn-meal and one cupful of stoned and chopped dates. Steam for three hours or bake.

Date-Pie—Line a plate with rich crust and fill with dates, stoned and cut fine, mixed with the grated rind and juice of a lemon, sugar to taste mixed with a spoonful of flour, four tablespoonfuls of water. Add a top crust and bake.

Date Cream Pie—Line a deep tin with rich crust and bake. Then fill with one and one half cupfuls of stoned and chopped dates mixed with sweetened and whipped cream sufficient to fill the pastry. Cover the top with a meringue, brown slightly in the oven, and when cold dot with bits of bright red jelly, or the jelly may be cut in stars or other fancy shapes.

Date-and-Apple Pie—Line a pie-tin with a good pastry and fill with a mixture of chopped dates and apples, sprinkle over one half teaspoonful of cinnamon and one half cupful of sugar, cover with a top crust and bake about one half hour in a moderately quick oven.

Date-Pudding—Mix four ounces of butter with twelve ounces of grated bread-crumbs, add one pound of stoned and finely chopped dates, six ounces of sugar, one well-beaten egg, one gill of milk and two heaping tablespoonfuls of flour sifted with two small teaspoonfuls of baking-powder; steam for three hours and serve with a sauce.

Date-Cake—One cupful of sugar, one half cupful of butter, two well-beaten eggs, one half cupful of milk, a pinch of salt, one and three fourths cupfuls of flour sifted with one half teaspoonful of soda and one teaspoonful of cream of tartar, and one cupful of stoned dates chopped fine.

Date Layer Cake—One cupful of butter, two cupfuls of sugar, one cupful of sweet milk, three cupfuls of flour sifted with three teaspoonfuls of baking-powder and the whites of six eggs beaten very stiff. Bake in layers and when cool spread with the following filling: Boil one cupful of sugar with three tablespoonfuls of water until it will thread, then pour it slowly over the beaten whites of two eggs, beat well, add one half teaspoonful of vanilla and two thirds of a cupful of stoned and finely chopped dates. Ice the top with plain white frosting.

Date-Dessert—Moisten some fresh cottage cheese with a little sweet cream, put a layer in the bottom of a glass dish, on this put a layer of chopped dates mixed with one third of the amount of chopped nut-meats, sprinkle with sugar, then add another layer of cheese, a second of dates and a third layer of cheese. Sprinkle the top with sugar and decorate with a few nut-meats.

Cookery Kinks

When using stale bread for puddings, etc., always soak it in a cold liquid. Bread that has been soaked in cold milk or water is light and crumbly, while that soaked in hot liquid is heavy.

Rice will absorb about three times its own measure of water in cooking, and rather more of milk.

Water in which rice is boiled, if not all absorbed by the rice, should be saved for adding to a cream soup.

A cupful of boiled rice left over may be added to the breakfast muffins or waffles, making them lighter, more palatable and digestible. Or it may be used for a rice-pie.

One ounce of butter and one half ounce of flour will thicken one cupful of liquid in making sauces.

Allow two level teaspoonfuls of baking-powder to each cupful of flour when no eggs are used in the baking.

One level teaspoonful of salt will season a quart of soup, sauce or vegetables.

In making desserts allow one cupful of sugar and one tablespoonful of flavoring extract for a quart of any mixture to be frozen. One teaspoonful of extract will flavor a quart of custard or pudding.

Four eggs should be allowed for each quart of milk in making cup custards, and from four to six eggs to a quart of milk for custards to be turned from the mold.

To keep lettuce crisp, place the roots in cold water, but do not allow the leaves to rest in it. When ready to serve, wash it in cold water and drop it into another pan of ice-water. Shake the water from the leaves before serving.

Whites of eggs should be very cold and beaten in a cool place if a stiff froth is desired.

To save the yokes of eggs, when the whites only are used, drop the yolks into a tumbler of cold water, set in a cold place, and they will keep fresh for several days.

If half a lemon is left over, place it on a plate and turn a tumbler over it, it will keep fresh much longer than if exposed to the air.

Fresh lemons if laid on a paper on a shelf with a tumbler turned over each one, will keep fresh for weeks.

A wire dish-drainer placed on top of the stove makes a fine bread-toaster. The bread will toast quickly without burning.

Home-Made Steamer—For those who have no steamer, and who wish to make the steamed puddings which are generally relished more during the winter months, the following suggestion will prove helpful. Have two agate pails, one of them a little larger than the other. Put your pudding in the smaller pail, and cover tightly. Set this in the larger pail, with an old saucer underneath, to allow the water free play when boiling. Put a thick cloth over the larger pail, then add the cover, and set a flatiron on top. You will thus keep in the steam and prevent the pudding from falling. Put in sufficient water, so you will not have to disturb it for a couple of hours (about one third full will do), then add water as needed. Follow out these directions carefully, and your pudding will be a success.

Buttons for Cuff-Links—In this day of effective dress accessories, pretty cuff-links are a valuable addition to the wardrobe. One enterprising young woman makes a pair from four buttons, using those with shank fasteners. She passes a shank through each cuff buttonhole, and unites the two by a small safety-pin. In this way she has plenty of cuff-links to match her various frocks.

Steamed Indian Pudding—To two cupfuls of corn-meal add one cupful of flour, one half cupful of molasses, one pint of milk, one well-beaten egg, one large teaspoonful of baking-powder. Mix well, then add one cupful of chopped raisins and one half teaspoonful of salt. This should be steamed four hours and can be made without raisins if preferred.

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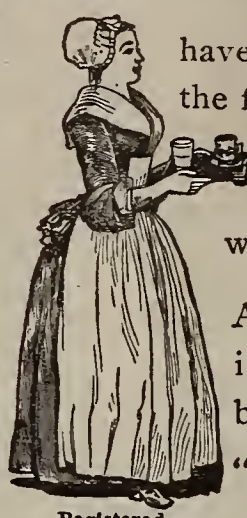

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